

BRITAIN'S ONLY MAGAZINE DEVOTED TO THE AMSTRAD CPC 464, 664 AND 6128
No. 14 NOVEMBER 1986 £1.00
NOT an official Amstrad publication!!
AMSTRAD ACTION
THE MOULD-BREAKING MAGAZINE FROM FUTURE PUBLISHING
ART STUDIO
Full review of this powerful painting package
ART STUDIO
CAPS LOCK
TAB
SHIFT
REVOLUTION
Big bouncing Mastergame from Vortex
MAPS GALORE
Dan Dare and Price of Magik mapped in full
PLUS
GAME REVIEWS ● PILGRIM ● BUMPER CHEAT MODE
ABSOLUTE BEGINNERS ● BOOTING UP CP/M
EDUCATIONAL SOFTWARE ● NEWS
VIEWS ● SPECIAL OFFERS ● AND MUCH MORE
WIN A GHETTOBLASTER!
Mastertronic mega-competition

THE LINE-UP

AMSTRAD ACTION NOVEMBER 1986

FRONT END

EDITORIAL ● NEWS ● LETTERS

SERIOUS SIDE

REVIEWS ● ARTICLES ● PROFILES



ACTION & ADVENTURE

OVER 15 GAMES ● MAPS ● THE PILGRIM



INTERACTION

THE SECTION CREATED BY AND FOR YOU





DEACTIVATORS
ARE COMING SOON!
BAD TIMES GUYS! As head of security at the Gravitational Research Institute I am just settling down to my roast banana and garlic pie when suddenly my hotline goes! A fanatical group of saboteurs have infiltrated the Institute, planted numerous time-bombs AND reprogrammed my robot guards to give me a hard time!
Well, that's it then! I have to call in my elite force of Deactivator Droids to clear the 5 labs and sort out the nutty guards. Of course, it's not so easy to move from room to room when floors may be ceilings and ceilings may be walls!
If they can throw the bombs out before we ALL end up defying the law of gravity then maybe I can finish my pie!
Filmed in glorious 3 Dimensional Deactivision
for your
SPECTRUM COMMODORE and AMSTRAD
MARKETED & DISTRIBUTED BY
REAKTÖR

Amstrad Action
Future Publishing Limited
The Old Barn
Brunel Precinct
Somerton, Somerset
TA11 5AH
Phone: (0458) 74011

ED LINES

Hasn't it been a wonderful summer? If you're talking about the weather, then you must be joking: the West Country is renowned for rain, and it has certainly lived up to its reputation this time. The clack of Arnold's keys has usually been accompanied by the tap of Somerset rain on the windows.

But at least there has been plenty to write about – and plenty to offer you if you haven't been able to make it to sunnier climes this year. Cheat Mode, in particular, has taken off with a vengeance: five pages of powerful pokes and two magnificent maps. Not only have we mapped *Dan Dare* in colour, but also the whole of *The Price of Magick* in a four-page extravaganza. That should keep you busy for a while!

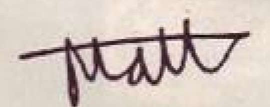
On the Serious Side we have the cover story – a three-page review of the powerful *Art Studio* drawing package – together with a look at the state of educational software for Arnold. Absolute Beginners and Booting up CP/M continue to help you make sense of Basic and the operating system, while Problem Attic merges with the new Hot Tips section and gets two pages all to itself.

And you can read all about us too: we have kicked off the Day in the Life series, in which we look at unusual uses for Amstrads, by looking at the way we produce *Amstrad Action*.

Action Test is packed full as usual, though this month has been a little scarce for games meriting *AA*-Rave status. Mastergame, however, is *Revolution* – turn to the middle to find out more.

And we have a superb competition for you. Those awfully nice people at Mastertronic are giving away piles of electronic goodies if you can put your artistic ability and imagination into gear. Ghetto Blasters, Walkmen and awfully neat digital watches are up for grabs for the best picture – see page 89 for more details.

So stop staring at the rain: open up *AA*, turn on Arnold, and have fun.





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VOICE OF THE PEOPLE

What! – I hear you shout – not only do you have the cheek to remove Hi-Score, but now you've got rid of Voice of the People as well! How could you!

OK, OK, I know Voice of the People is conspicuous by its absence this month; but we are not, I repeat not, axing it all together. It's just that we want to change it.

Instead of you simply reviewing games, as Voice of the People stands now, we want you to actively criticise what we say in our reviews – or indeed anywhere in the magazine. If you think Bob got it wrong on your favourite joystick-waster, or Andy was unfair about your favourite utility, then let us know – preferably in less than 200 words. And this doesn't apply just to the Amstrad owner: software publishers and authors are welcome to contribute too.

But we don't just want you telling us what a load of wallies we are. You are going to have to justify your criticisms if you want us to publish your letters! The address, as usual, is **Voice of the People, Amstrad Action, Somerton, Somerset, TA11 5AH**.

WHOOPS!

The observant reader will have noticed a bit of a booboo on our part in issue 13 of this esteemed journal. On pages 38 and 39 *Dan Dare* would appear to have achieved *AA*-Rave status with an *AA* Rating of only 70 per cent, while *Mission Omega* fails to get one with a rating of 80 per cent.

The sticker is in the right place, but unfortunately the ratings box got transposed by mistake: *Dan Dare* is, in our view, the better game of the two. As you may have also noticed, Toot is notably absent from these pages too, so perhaps ... ?



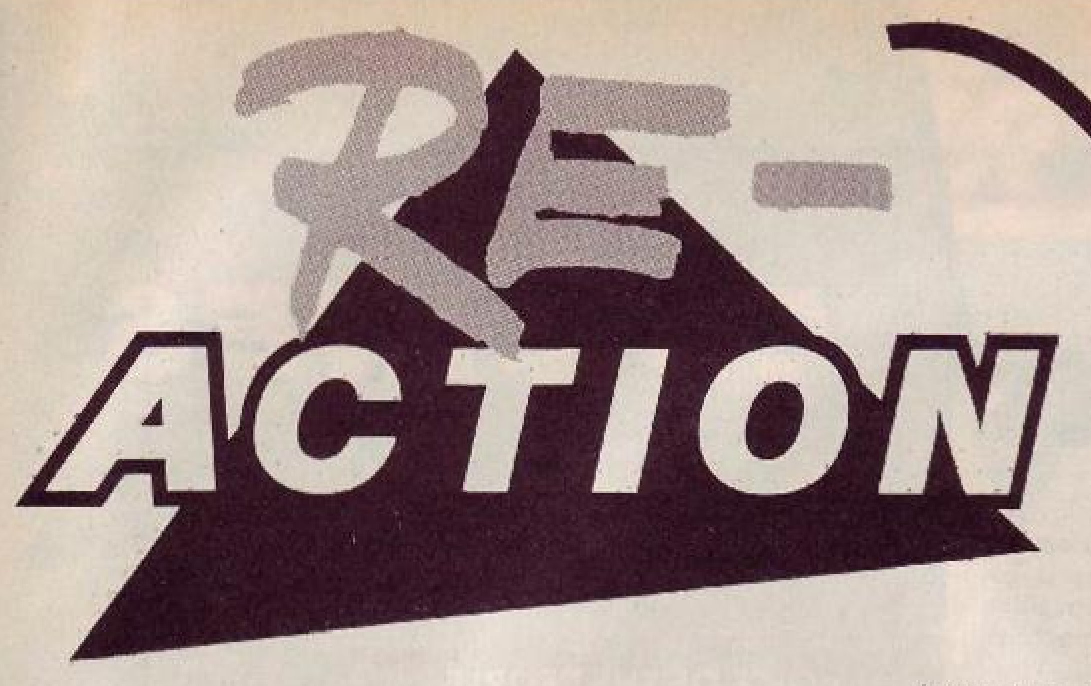
PLUS TWO vs 464

Although the recent Personal Computer World Show at Olympia was dominated by Alan Sugar's new PC, he also chose this venue to launch the Spectrum Plus 2.

This machine – basically a ZX Spectrum with a decent keyboard and built-in cassette deck, selling at £149 – would appear to offer strong competition to Amstrad's own CPC 464. It is true that the 464 comes complete with a monochrome monitor for £199, or £299 with a colour monitor; but the competition is still there.

The main threat comes from the huge library of games software out there for the Spectrum range – even now many games appear in Spectrum incarnation before the Amstrad versions appear. However, in most other ways the CPC 464 is a better machine: in particular it offers a faster version of the programming language Basic (the Spectrum is particularly slow here) and far better graphic and colour resolution.

Amstrad assures us that production of 464s is still at full strength, and the company does not intend to drop the machine. But it is still a potential worry to 464 owners and buyers. We (of course) will still support the 464, and there is every indication that the rest of the industry will too. However we will be monitoring the situation carefully and would like to hear from anyone who has trouble buying a 464.



Thanks for all your letters again this month: we actually counted, and there are almost 300. So please don't be offended if we have room to print only a very small selection. You'll understand that we can't reply individually and still have time to put out a magazine!

A few points to bear in mind when writing: Keep your letter to the point – the best are brief. If you have bits for different departments (subscriptions, mail-order, the Pilgrim, Type-ins, Re-action etc) put them on separate sheets of paper, each headed with your name and address and possibly even the date and your phone number (but one envelope will do).

Keep 'em coming!

Author! Author!

The computer-games industry as a whole gives too much hype to games that haven't been released, and when they are they are often not worth paying even 50p.

Also too much attention is paid to the games or software and a blind eye is turned to their authors. People know only ace programmers Jon Ritman, Bernie Drummond and Paul Shirley for their games: *Batman, Confuzion, Spindizzy*. Programmers should be credited. Games could have the name of the authors at the top, so the buyer can expect good quality if that programmer has in the past produced good software. I was wondering if you could do something about this in your magazine. Who wrote last month's mastergame, *Starstrike II* for instance?

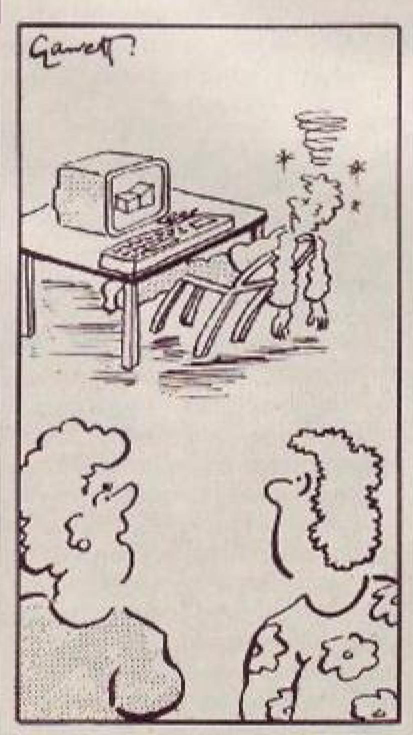
I have owned my 464 for almost two years and have decided to get a 6128 but cannot part with my old Arnold. Can you please tell me if a 6128 can be bought separately without any type of monitor, if so for how much, and can it be plugged into my CTM 640 colour monitor?

I would also like to hear from penpals or people wishing to buy software originals. Are there any user clubs in the Worcestershire area?

Mamood Sultan
109 Cranham Drive
Warndon, Worcester
WR4 9PQ

Last month's mastergame was by a team of programmers at Realtime Games, and corporate rather than individual effort is the rule rather than the exception nowadays.

As for buying a 6128 without a monitor, it's a question of striking a deal with an individual shopkeeper. But the 6128 needs an additional 12-volt supply for the disk, so it can't just be plugged into your CTM monitor.



"DRUNK ? – NO HE'S JUST BEEN PLAYING SPINDIZZY"

Wade's day's made

Shouldn't I get a prize? I am the only *AA* reader in the Dolgellau area. My copy is ordered for me every month at Siop-y-Cymro (the 'Welshman's Shop'). The area covers three or four main towns with populations over 2,000. In Merioneth county I know of only two other Amstrad users, but they don't get *AA*. Don't fear, I'll stick with you so long as Mr Bob Wade stays on the team – he must probably be the most experienced reviewer in the UK; I rarely disagree with his opinions.

Bryan John Parry
Dolgellau, Gwynedd

Diolch am eich llythyr, Ioan!

Bog of literature

I am an ex-proud owner of a CPC 464 – by which I mean that I am now only an owner of a 464. During the two years I owned the Spectrum I was literally flooded with all sorts of mail such as software catalogues and new-product leaflets from Sinclair Research, all of which I found interesting. Since obtaining my 464, however, I have received only one letter from Amstrad and that was only to try to lure me into joining their user group. This may be a trivial point, you may think, but it merely illustrates to me that Amstrad is only interested in making big profits.

Other examples of this mercenary attitude include the 664 saga and Amstrad's refusal to allow third-party production of the QL after acquiring Sinclair, while not producing it themselves. Alan Saccharine might be a more suitable name, as I definitely detect a sour aftertaste.

Ronan McKenna
Kells, Co. Meoth, Eire

You might try sending your address to Readers Digest *and the other AA (as in cars) if you like being literally (literally) flooded. Sinclair support was more necessary because the products were less reliable – if promises ever materialised and wares ever turned up.*

AA stars

I am writing to tell you how appalled I am that games like *V* and *Johnny Reb* are even allowed to be put on the market, let alone to be sold at almost nine pounds. Most full-whack computer games are absolute rubbish and a complete rip-off. Something has to be done about this. Even though you do great reviews you still can't review every single one. Those you do review are pretty well checked out, though sometimes a month or so too late or not given enough space.

Why not, instead of just reviewing them, approve them? What I mean is test the games, then on the box somewhere put an '*AA*-Approved' sticker. If you did this it would save a lot of people like me who can't afford to fork out 10 quid on rubbish, and make software houses like Ocean think twice about making such drivel.

Christopher Makrisson
Leyland, Lancs

It's up to the software houses. We don't let them tell us what to say in AA*; could we tell them what to print on their packs?*

Give us a lift

I'd like to bring to the attention of your readers an often overlooked, yet vital and exciting element that can make or break a game: lifts. Scoff if you like, but think about this: where would we be without the old elevators? Ground floor, I suspect.

Games generally have one of two types of lifts: small ones or large ones. In the former category I could cite the escapades of Willy, Gilligan, Chuckie, Jack of the Jet Boots, Mario and many more. Who could ever forget that scene in *Chuckie Egg* where our hapless hero plunges to certain doom only to be scooped at the last possible minute? Thrilling stuff. In his adventure in space that lovable working-class-kid-come-good Willy encountered quite a few lifts. When asked about them he joked, 'I'd of never of got up there without them.' Ha, ha!

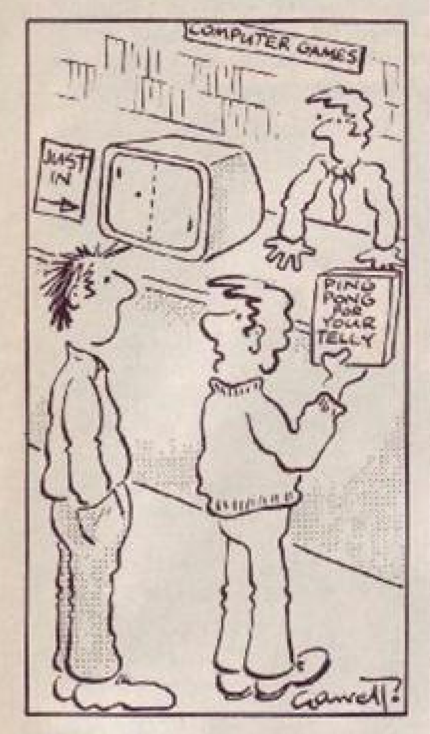
Anyway I'm going off at a tangent here.

The other category is large lifts, or 'big ones', as they are often referred to. This breed has appeared in classics like *Impossible Mission, Pyjamarama* (complete with a dart), *Rocky Horror Show, Thing on a Spring* – I could go on – I will go on – *Marsport, Grumphey, Spe-*

 A vampire ...

Some do ask us if they can reprint an 'AA Rave' symbol on their package, or a rich phrase from Bob Wade's prose. But you can't expect them to stamp World Cup Carnival, for instance, 'AA rating: 0%'.

So it's up to you to part with a pound, buy the mag and read the review before forking out any tenners.



"NOT EXACTLY UP-TO-DATE, ARE THEY?.."

Body-building Arnold

Has anybody at DK'Tronics or some other third-party supplier thought of bringing out a second processor or sideways ROMS for the dear old Arnold? Seemingly the Amstrad has the capability to handle both.

Why don't you copy your rival mag and bring out sweatshirts and t-shirts with your logo on the front?

Steven Allan
Edinburgh

There are plenty of sideways ROMs on the market: see July, p26-28. Nobody has produced a second processor, and we can't see there being much demand for one. If you want a more powerful machine, Amstrad would say, here is our PC.

Maybe we could also think of bringing out a roadmap with our logo.

Mega-moan

Whenever you see an advert for a piece of software (eg Ocean) you see underneath 'Amstrad £8.95, Spectrum £7.95'. Why is it that Spectrum owners can get most software a pound or two cheaper than we can? It's not fair!

When are you going to give away another cover cassette? I thought *The Covenant* was fantastic and worth more than 50p.

Neil Selwyn
West Lulworth, Dorset

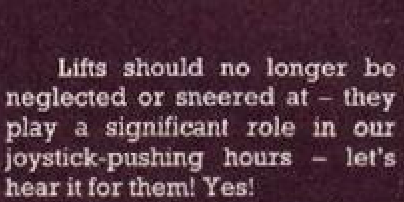
We asked Ian Stewart, managing director of Gremlin, which advertises Commodore software at £7, Spectrum £9 and Amstrad £10 (with 5p change). The Amstrad game costs more "'cos it's better: there's music, and the graphics took longer to work on than than the Spectrum's. Within a short time the Spectrum programs will be the same price; with the advances in Spectrum coding they will take up the same programming time. There has definitely been a quality difference. Because of its general handling you can produce a better product on the Amstrad, without doubt."

The official answer from "a spokesman" at Ocean is the extra cost of converting a prog for the Amstrad – most was first written on the Spectrum or Commodore. Second, there aren't as many Amstrad owners, so economy of scale applies.

llbound, ... Many of these have radical new features, for instance the Springy Things elevator has a sticky substance on the floor which makes it impossible for you to move when it is motion. In *Pyjamarama* and *Spellbound* you don't even get to see the lift moving – incredible but true.



"I'M AFRAID IT ONLY WORKS IF YOU KNOW THE PASSWORD AND ARE CARRYING THE CORRECT OBJECTS..."



Lifts should no longer be neglected or sneered at – they play a significant role in our joystick-pushing hours – let's hear it for them! Yes!

Listen, why don't you start a lift-of-the-month featurette in which readers could nominate their faves? My personal rave must be the supurb one in *Marsport* – a true masterpiece. Wow.

Alex Duck
Cheadle, Cheshire

Listen, Alex. This is one twig, up at the top of the tree of knowledge, yet to be elevated into a PhD thesis. You're obviously a candidate for higher education. Rise to the challenge!

Snails vs hares

I find it impossible not to be slightly frustrated and annoyed when every month I go to any bookshop and see *Amstrad Action* up on the shelf, while I know my copy is still 'on its way'. To make matters ironic, the July issue came by post several days before it arrived in the bookshops, and yet I find *AA* apologising for a delay! What are the exact procedures for subscription?

Joseph Doyle
Waterford City, Eire

Avon Direct Mail (the contractor we use) posts out subscription copies on the last Friday of every month. Newsstands usually get theirs (via other channels) the following Thursday. However we will look into your case.

Really! Number 1!

I have got two, yes two, copies of *AA* issues 1 and 3. If anyone wants to buy either of them, state your bid.

Robert Hester
62 Roseneath Avenue
Leicester, LE4 7GT

You're lucky to possess the rare AA 1, but we have plenty of number 3 for sale here at the Old Barn.

Hi-score non-haiku

Hear ye my tale of woe:

I went down to my local store
to buy a game to play.
I went straight to the counter
and asked for *Green Beret*.

I think the game is really great;
I'll play it evermore.
And one of my ambitions was
to get in your 'Hi-Score'.

At first I didn't do so well
but now I'm getting better.
But now I'm so frustrated,
which is why I write this letter.

I'd just achieved 69,000 (enough
to fame your table)
so I was about to send it,
excitement in the air.
I opened up issue 12
and found it wasn't there!

Well, that was it; I hit the roof;
I thought, 'It can't be true!'
I said to myself, fuming mad,
'*AA*, how could you!'

I suppose you think it funny,
the way you pull your tricks.
Well, if you do it one more time
I'm subscribing to [*some other mag – ed.*].

(I'm not, really! But bring back Hi-Score!)

S. Hoban (age 11)
Garswood, nr Wigan



"DARLING – I JUST GET THE FEELING SOMETHING'S MISSING"

An evergreen reader

Please could we have a little less exhortation to 'drool' over our software? It's terribly bad for the disks, apart from anything else.

And don't assume all your readers are younger than you when you write. I finally gave up on your rivals when they included in a questionnaire, 'How much pocket-money do you get? How much Pepsi do you drink?' They also advertise t-shirts modelled on someone who didn't look a day over eight. This can alienate the more 'senior' games players such as myself – if late 20s can be described as 'senior'.

A suggestion: How about a few retrospective re-reviews? For example, you could briefly sum up what you now consider to be the best sports simulation or the best beat-em-up. You could give a much better assessment of 'staying power': how many times did you really reload the game after the first couple of weeks? A previous correspondent suggested his favourite 'evergreen' was *Star Avenger*. My own candidate would also be a Kuma product: *Fruity Frank*. I always reload it with pleasure and seem to find some new tactic in it every time.

You told D Herrington in your September issue that it was tricky to boot a program from disk using the |CPM command. Unless I'm missing something, all you have to do is use the 'Setup' command which the manual explains unusually clearly, type the name of your command program (followed by ^M) into the 'initial command buffer', and then answer yes to all the other questions.

Paul Murphy
London N19

'Drool' was an Andersonism. He now works upstairs, which might explain why it's damp down here.

Sir, we strenuously avoid writing down to our readers. We know a good many parents and pensioners are numbered among them.

If new products remind us of oldies (goldies or otherwise) that's when reviewers re-mention them. There are various office favourites, depending on personalities: Andy and Bob like Thrust; *Jane Farmer and Di are wont to load up* Wriggler *or* Sorcery Plus; *Trevor chooses* Shogun; *Matt particularly goes for two-player games such as* Harvey Headbanger.

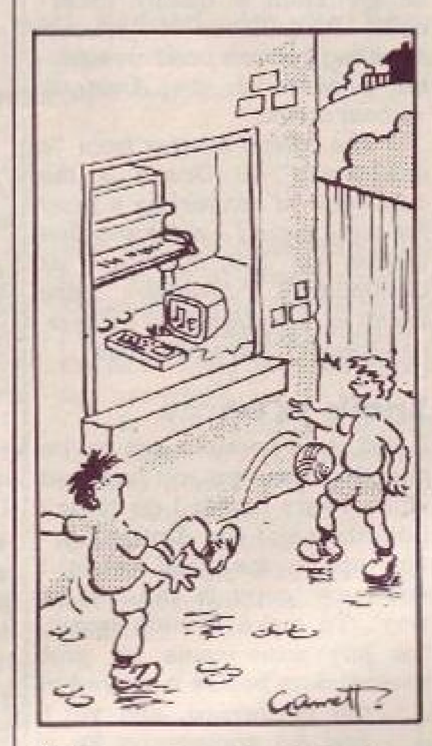
As for Setup, you could indeed under CP/M 2.2 do as you suggest. CP/M Plus doesn't have this utility, and you use the Submit method as outlined to Mr Herrington.

Mum's not knitting

I am a mum with three young children, and we recently purchased a 464. I never thought that I would become so interested it what it can do. (What's the saying about never being too old?) I want to thank you for such an excellent magazine. This is no flannel: being so new to computing I bought them all and I found yours the best value for money and the most interesting. Better than knitting patterns any day!

Lynda Gunn
Hockley, Essex

Two in a row. The letter ed'r fails to think of a witty remark about evergreen needles.



"GETS ME OUT OF PIANO PRACTICE EVERY TIME..."

Impossibly long

How long do I have to wait to get *Impossible Mission* by US Gold? I have been waiting eight months: I subscribed in December and ordered it as one of the two free games.

MC Bover
Shenfield, Essex

US Gold tells us the game is now to be released at the end of September, and we reviewed it in our October issue. In April AA sent waiting subscribers the other free game and a letter offering US Gold's Winter Games *or other alternatives.*

Julie's indexed us

I have produced a list of all the games reviewed in *Amstrad Action* (except those in Amsyclopedia) on my word-processor – updated every month as soon as I get my copy of *AA*. Entries are in alphabetical order, with software company, price of tape and disc, joystick or keys, AA rating and which mag it's in.

Readers can buy copies for 50p. Enclose an sae and say which CPC you have, so I can miss out games which aren't compatible with your computer (or you can have have a complete list if you want). It's not worth doing a list just for PCWs. There is also an Amsyclopedia list, which also costs 50p.

Julie Gilg
9 Sylvan Avenue
Exeter
EX4 6ES

This allows us to get in a plug for back issues covered in your very efficient-sounding index, Julie. The Old Barn is out of numbers 1, 2, 6 and 7, but otherwise all can be ordered for £1.35 including post and packing. Number 8 with the PSS cassette costs £1.85.

Vive l'Arnold!

It does not exist a good French mag like yours. I know in Paris only one shop which sells *AA* and it takes me each month more than one hour to go and buy it (with an increased price of 150%).



So, I've thought about a subscription. But I do hesitate. I've read in a French mag that some people had problems with foreign (UK!) subscriptions.

Perez Thierry
149 rue Oberkampf
75011 Paris

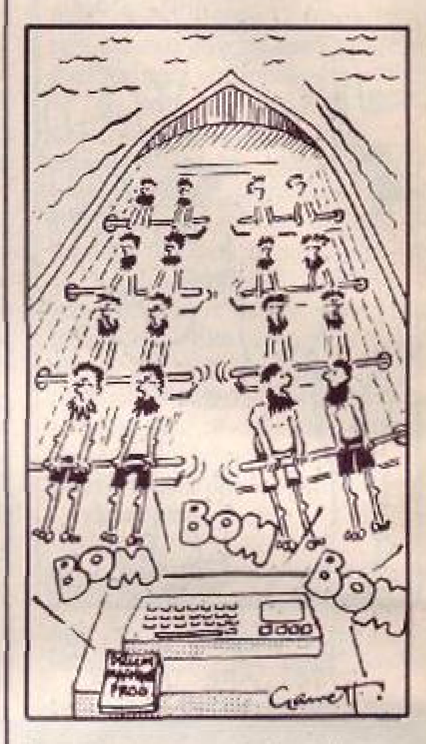
Subscriptions (pas de problème, Perez) posted to Europe cost £22.50 for douze issues, plus your choix of free joystick, dustcover or Thingi.

Elite bafflement

In the August issue Reaction, Problem Attic and Cheat Mode all had bits on *Elite*. I was worried, annoyed and baffled after reading your reply to 'a few niggles' from Phillip Miller. You said there was a bug in the cassette version. I received my *Elite* from you in spring when I subscribed. Is mine a dud or OK?

Simon Howlett
York

If the word 'Metropolitan' is printed on your cassette, it's the bug-free version. If not, send it direct to Firebird – not to us – for it to be replaced.



"I THINK IT LACKS THE PERSONAL TOUCH..."

Brand X

They get 40%, you get 94% overall. *AA* might make mastermag, but then who would get the raves? Can't wait for the next issue.

Jonathan Hurst
Windlesham, Surrey

You should see Bob smiling. Thanks, Jonathan.



"SYDNEY – ARE YOU PLAYING THAT MARSPORT AGAIN?.."



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Now it has them.

"Over 3,000 questions of no vital importance."



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TRACKER by Union Software

A totally new concept in computer wargames utilising artificial intelligence. Versions will differ substantially to make full use of machine capability. Controlling up to 8 remote skimmers you must wipe out renegade intelligent forces across 5000 tracks. One to one combat is featured in fast 3D.

STARGLIDER by Argonaut Software

A true arcade quality 3D combat flight simulator of the first order. A high action product with novella and poster included. Featuring stunning graphics, realistic sound effects and true 3-D perspective.

ADVENTURES by Level 9

JEWELS OF DARKNESS-A premier collection of classic adventure.

SILICON DREAMS-A modern space adventure.

These sizeable adventures are in three parts and represent excellent value for money. Each contain over 600 graphic locations and feature the latest Level 9 text handling system allowing multi command sentences, help and oops. Level 9 are undisputed leaders in cassette based adventure and are renowned for their intriguing plots and puzzles.



		SPECTRUM 48/128 TAPE	SPECTRUM 128 TAPE	C/DORE 64/128 TAPE	C/DORE 64/128 DISK	C/DORE 128 DISK	AMSTRAD 464/664/6128 TAPE	AMSTRAD 664/6128 DISK	AMSTRA 6128 DISK
THE ART STUDIO	OCP	14·95	–	14·95	17.95	–	–	–	19·95
ADVANCED ART STUDIO	OCP	–	24·95	–	D	–	–	–	D
THE MUSIC SYSTEM	SYSTEM & ISLAND	–	–	14·95	17·95	–	15·95	19·95	–
ADVANCED MUSIC SYSTEM	SYSTEM & ISLAND	–	–	–	39·95	–	–	29·95	–
STARGLIDER	ARGONAUT	–	–	D	D	–	D	D	–
TRACKER	UNION SOFTWARE	D	–	14·95	17·95	–	D	D	–
THE PAWN	MAGNETIC SCROLLS	–	D	–	19·95	19·95	–	–	24·95
JEWELS OF DARKNESS	LEVEL 9	14·95	–	14·95	14·95	–	14·95	19·95	–
SILICON DREAMS	LEVEL 9	D	–	D	D	–	D	D	–

VERSIONS MAY VARY FROM DESCRIPTIONS ABOVE



THE PAWN by Magnetic Scrolls

The most talked about adventure of the year! Containing the most sophisticated language interpreter and text-handling system ever seen in an adventure together with 30 picturesque illustrations and unique scrolling screens. Game includes novella and poster.

THE ART STUDIO AND ADVANCED ART STUDIO by O.C.P.

The leading art and design package renowned for its ease of use and comprehensive list of features. The Advanced Art Studio is designed to stretch the limitations of individual machines and incorporates a low resolution mode on Amstrad and Commodore. Manual and upgrade offers included. Printers supported using grey scale.

THE MUSIC SYSTEM AND ADVANCED MUSIC SYSTEM by System Software

The best music programs for Commodore and Amstrad. The Music System features Keyboard, Editor and Synthesiser, and Advanced Music System has additional Printer and Linker (continuous linking of music files) modules, Commodore Advanced version also has a comprehensive MIDI module. Utilising WIMP technology with comprehensive manual and upgrade offers where applicable.

BIRD

COMMODORE 64/128K

AMSTRAD

THE ART STUDIO

RAINBIRD

THE MUSIC SYSTEM

out of the Ice Age

AMSTRAD	ATARI	ATARI	ATARI	MSX	APPLE	IBM	AMIGA	MAC
PCW	800/130	800/130	ST		2 SERIES	CMPTBLES		512/PLUS
DISK	TAPE	DISK	DISK	TAPE	DISK	DISK	DISK	DISK
–	–	–	–	–	–	–	–	–
–	–	–	D	–	–	–	–	–
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–	–	–	24·95	–	D	D	D	D
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–	–	D	24·95	–	19·95	D	24·95	24·95
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Biggles megagame, megazine reminder

If you buy *Biggles* (disc) you get a totally free megagame. Well, that's what the very smooth-scrolling message told me anyway. If you type Run "runme" you will see for yourself.

When my subscription ends will I be notified? I can't remember which issue I subscribed from, and I wouldn't like to miss an issue of my favourite magazine.
Andrew Soar
Diss, Norfolk

We've seen Biggles *only on cassette, so rang Mirrorsoft to check your tip, Andrew. All hell broke loose. Turned out an 'adolescent spoofer' working for their firm of duplicators sneaked the so-called megagame onto copies of* Sai Combat *as well – a see-what-I-wrote bit of arcade action.*

It won't happen again. (Pause for dust to settle.) But don't be sad; 'it wasn't good enough for anyone to be disappointed,' said Mirrorsoft's Pat Bitton. The lad concerned will have to read the next letter.

As for your sub, yes: you get a reminder letter with your second-from-last issue. Now, if you buy a binder (£3.95, advt) you always know how many of the 12 spaces are left. In your case, subscriber number 2959 (I looked you up), Feb will be your final. So this is an Extra Reminder and you will have No Excuse.

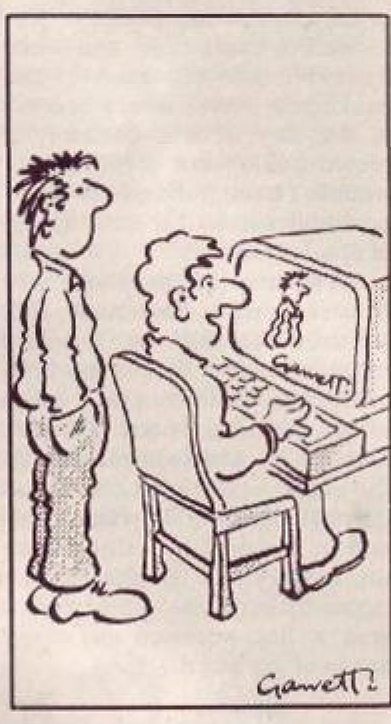


Entrepreneur

Over the last few months I have noticed that some of the games you review have been written and sold by the same person. I have written a few games using *Laser Basic* and *Compiler* and want to sell them myself, but my mother says that you have to be licensed or something. Is this true? If so could you tell me what to do about it – and don't say, 'Send them to a software house to be published,' because I don't want to.

By the way, I have just fed my cats with US Gold's *World Cup Carnival*, it was so bad! I bought it a few days before your warning came out. What a load of rubbish! The original isn't much good either.
Justin Mason
Shanklin, Isle of Wight

You don't have to have a license, Justin, but you won't make any money out of it. Selling mail-order from home opens you up to all sorts of hassles, especially nasty people wanting their money back. It just doesn't seem possible anymore to break into the software market on a shoestring budget: the big houses, with their massive advertising budgets, have such a stranglehold on the market. Your best bet might be to try contacting some of the small user-groups magazines (see last month's Reaction). Perhaps we should do an article on this topic in a future issue.



"I'M PROGRAMMING IT TO DRAW CARTOONS FOR AMSTRAD ACTION"

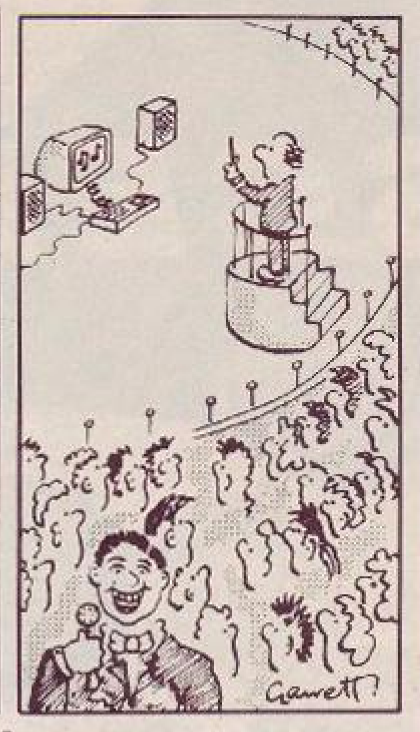
Buy, by Mr Muff

It's Andrew Duff here! That's Duff and not Putt, as seen in issue 11. Please print my name correctly if, buy a 9.97561239 × 1099-to-1 chance, it is published.

In your mail-order system, can you order games from earlier issues than the present one?
Andrew Duff
Tain, Ross-shire

Enough, Mr Xuff, don't get in a huff and we won't talk rough about handwriting.

Of the stuff we've offered, all but four are still in stock or can be obtained (allow a bit of extra time) from our suppliers. As for Mexico 86, Big-League Soccer, Alex Higgins World Pool *and* AH Snooker *– tough.*



"AND NOW FOR THE 1986 PROMS, SOMETHING OF AN INNOVATION..."

What moan?

Please could you tell me just one thing: what is it that we 664 owners are supposed to be moaning about? Is it because the computer has been withdrawn or because the 6128 was brought out after the 664? In fact we are not moaning. Perhaps 464 owners will put their brains into gear before they open their mouths.
AC Smith
Sunderland

As J Smeets of Venlo (Netherlands) wrote in May: 'Would that moaning moanies moaning about the moaning moanies that moan about their 664, please stop moaning!'



Call me anything but not too late for lunch

I'd like to know what my CPC 6128 is called, if the 464 is Arnold and the 8256 is Joyce.
Simon Dunne
Newbury, Berks

Call it what you like; it can't hear you.

But seriously though, all the CPC machines (464, 664 and 6128) are nicknamed Arnold. Don't worry about why; I wouldn't want to burden you with the story of some prat back in the mists of time who did an anagram on Roland Perry, the man most responsible for developing the CPC range. Even more boring: Joyce was Alan Sugar's secretary.

Do not ask what CPC stands for. Colour personal computer? Possibly, but it doesn't stand for anything unpleasant in any language we could think of. We have no theory about the initial '6' in 6128.

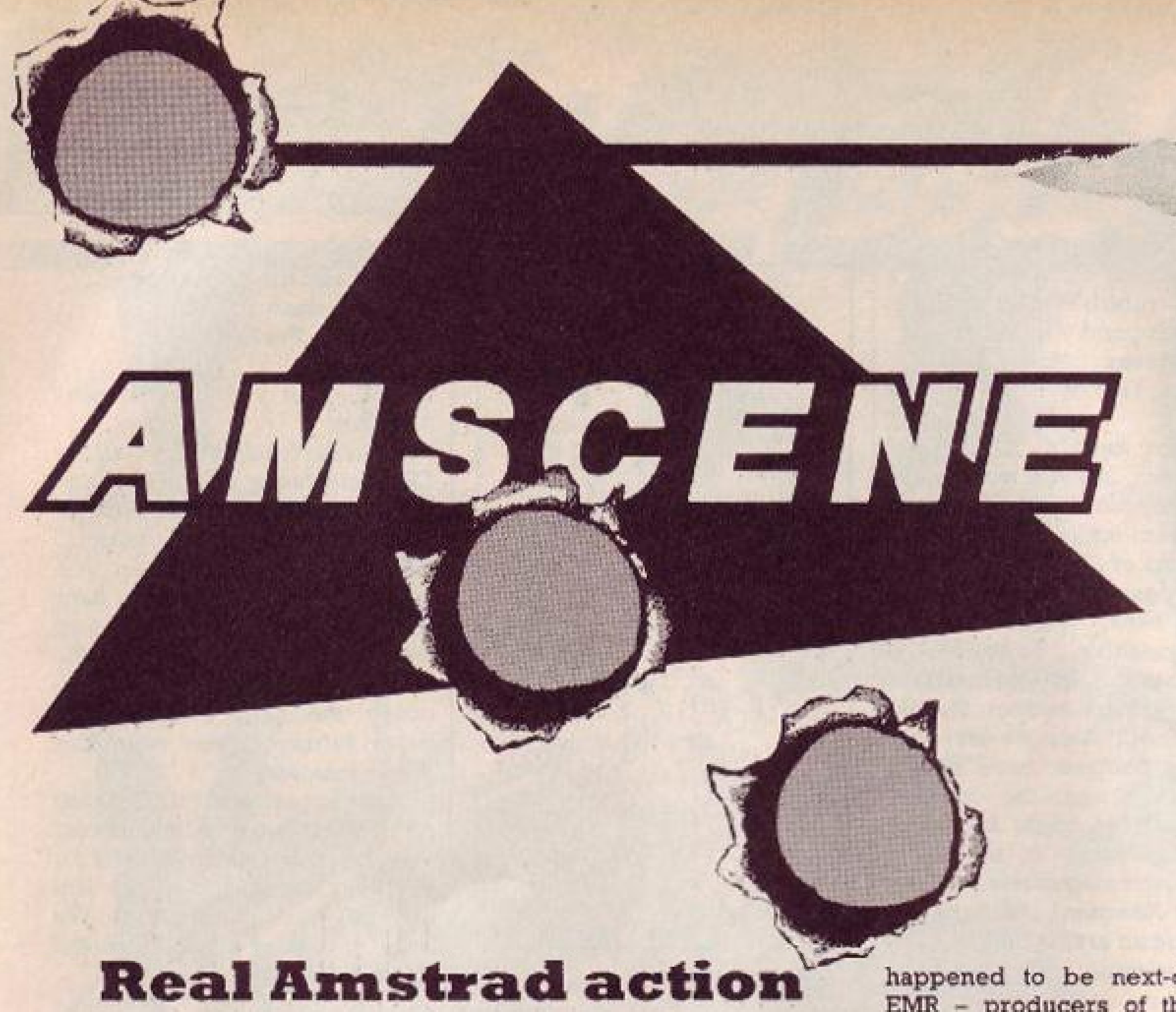


"THAT'S NOT HARDRUMS – THE TRIBES JUST BOUGHT A DRUM MACHINE PROGRAM FOR THEIR AMSTRAD....."

Trans-temporal

The July issue says *Disc 50* is tested on page 66, but my copy has the end of the *Toadrunner* review and *Rock'n'wrestle.* In the September issue, one of the leters mentions your review of *Disc 50*, so it appears that some got it and some didn't. I am tempted to buy the program as it seems very good value for money. Could you please let me have a copy of the Action Test to help make up my mind?
K Wilson
Anglesey

Through a timewarp the review landed on page 62 of the August issue. For a quid (plus 35p for stamps etc) we can post you a back copy. That'll teach you to miss a month of the mega-mag!



Real Amstrad action at the PCW Show

The first week of September saw Britain's largest computer show of the year – the 9th Personal Computer World Show. In the spacious but hot halls of Olympia in London, we at *Amstrad Action* had a ring-side seat: for the first time we were exhibitors as well as attenders.

The reason for our modest stand, on the upper gallery above the massive pavilions of Amstrad and Sinclair, was the launch of our new titles – *8000 Plus* and *PC Plus*, monthly magazines devoted to the Amstrad PCW and PC ranges respectively.

Our timing, fortunately, was perfect. On the Amstrad stand visitors were seeing the new PC1512 for the first time. In *PC Plus* they could read the full details from the press launch the day before.

It was hot-deadline action like a daily newspaper. Two pages of *PC Plus* had been held open for Matt's report from the launch. Matt phoned details to Chris down at the Old Barn; a motorbike raced to the printer with photos; presses ran enough copies overnight to satisfy demand for the rest of the show. It was hectic but we made it in the end!

Also on sale was last month's issue of *Amstrad Action*, with the seven-page special feature on music, 'Wired for Sound'. By coincidence(?) we happened to be next-door to EMR – producers of the *Miditrack Performer* package reviewed in that issue – and were treated to the full blast of the package's power every second of the day. It was certainly a crowd-puller, but at times we wouldn't have minded the more peaceful tones of a quiet game of *Space Invaders*.

The star of the show was Amstrad with the new PC. Amstrad's stand was usually more crowded than a student-union bar. Atari made a good effort with the 'Atari Village', and the Sinclair stand showed the new Spectrum +2. With games houses showing their wares, the odd robot accosting the unwary and the sun blazing down through the glass roof, it was a hot occasion in every sense of the word.

GAMES GALORE

As might have been expected, there were no shortage of new games on display at the Show – and some impressive stands from the bigger companies too. It was quite easy to wander around trying your hand at any of the thousands of titles on show, but not so easy to sort out the new launches for the Amstrad from the chaff.

Ocean released its schedule for the rest of the year, kicking off by announcing the imminent arrival of *Miami Vice* at a price of £8.95. As its name implies this is the official game of the popular TV series, in which you guide Crockett and Tubbs undercover in the build up to the big bust. It is styled as an 'arcade adventure', and we look forward to reviewing it soon. Also licensed from the film for release this month is *Highlander* at £8.95. Coming in November is *Cobra*, at the same price and based on – you guessed it – Stallone's latest beat-em-up; and December should see the release of *Short Circuit*, based on the Sci-fi movie of the same name.

Moving over to **Imagine** sees the release this month of *Galvan*, based on the arcade game, and *Konami's Golf*, both at a price of £8.95. October sees the release of *Mag Max*, *Yie Ar Kung Fu II* and *Terra Cresta*, all based on arcade classics and all priced at £8.95. To round off this arcade game month Imagine should be releasing *Konami's Coin-Op Hits*, a compilation of

Spectrum +2 revealed

Much as it tears at the heart to mention a rival computer, Sinclair is now part of the Amstrad corporation and the new Sinclair machine, the ZX Spectrum +2, could be a direct competitor to the Amstrad CPC464. So here goes...

The Spectrum +2 is the first new Sinclair product to emerge since Amstrad's takeover; the new ownership shows. The new machine is basically the old Spectrum 128K Plus with a decent keyboard, a built-in data recorder and two joystick ports. It is compatible with most of the older Spectrum add-ons, apparently to the extent of still not taking standard joysticks.

It is priced at £149, which is £30 less than the older Spectrum Plus. It will probably do well if only because of the huge range of games available for the Sinclair machines. It is an unfortunate fact of life that, even now, many games are released quicker and cheaper for the Spectrum than for the Arnold – as your letters frequently point out.

It has to be seen as competition for the CPC464 on price alone. Amstrad is quick to point out that the 464 comes with a monitor as well, but it is £50 dearer with a mono screen, and £150 more with the colour screen.

Amstrad has said there are no plans to discontinue the 464, and that it is still selling well.

The good news is that, aside from the huge software library, the Arnold is a better computer all round. Graphic resolution of the Arnold is 640 × 200 in two colours, 320 × 200 in four colours, or 160 × 200 in 16 colours. The Spectrum can offer a pixel resolution of 256 × 192 with eight colours, but suffers from an unfortunate disease known as 'attribute clash'. This means that any eight-by-eight pixel grid can contain only two colours, which severely limits the colour graphic capability, and makes Spectrum games look much less vibrant than those for Arnold.

The other serious limitation of the Spectrum is its Basic: slow, limited and non-standard. Locomotive Basic, on the other hand, is acknowledged to be one of the best around and almost as fast as that of Acorn's BBC range.

We will monitor the effect of this new machine on the Arnold closely over the next months and if any of you hear of any problems with software or hardware availability, let us know.





their best-selling versions of arcade classics. And finally, December sees the launch of that classic *Donkey Kong* – the official version for the Amstrad.

On the **CRL** stand you could see snippets of new releases from the company – though you had to stand well back as they were being shown on a bank of 20 TV screens. *Deus Ex Machina* was being previewed, an unusual 'multimedia' experience that comes complete with accompanying tape featuring the voices and music of many well-known stars.

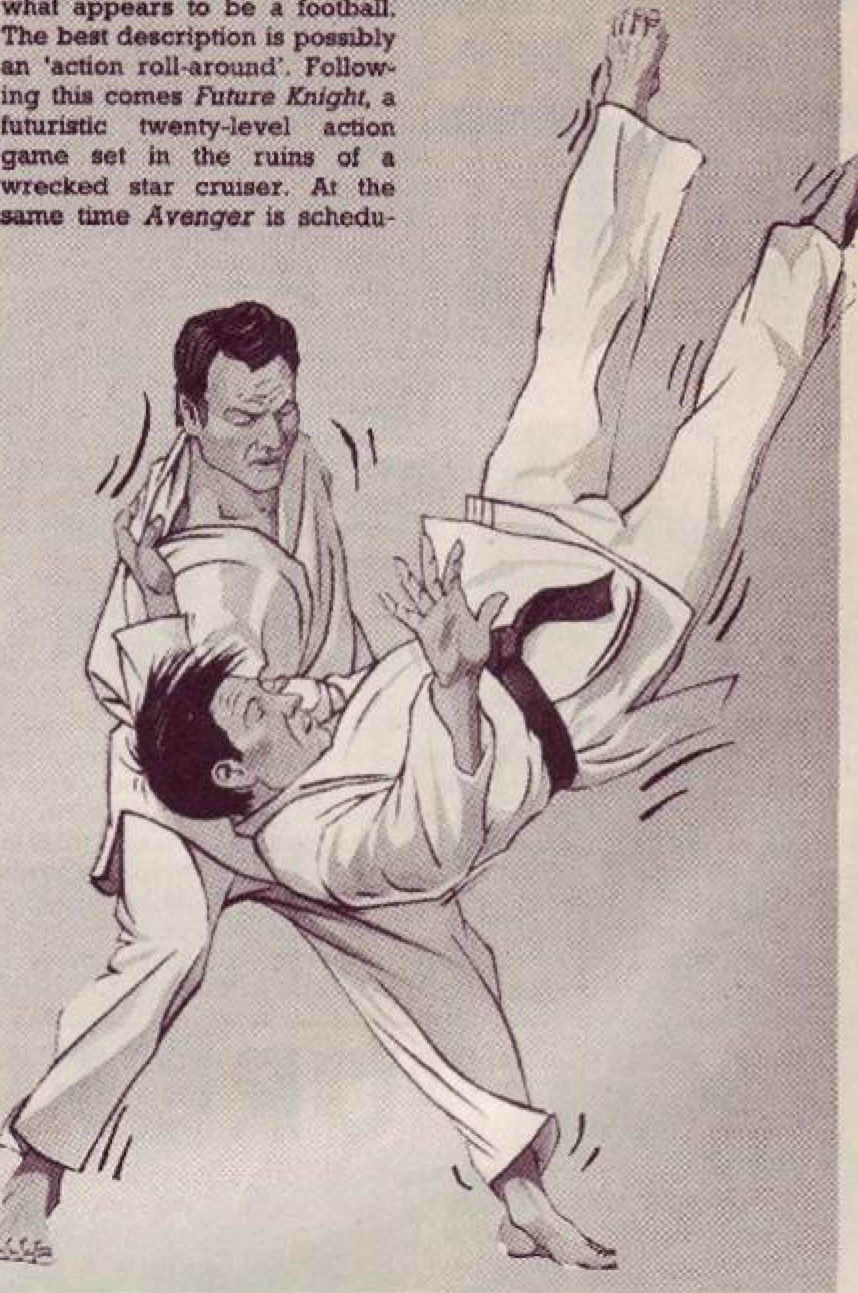
Also due for release, this time on Halloween, October 31st, is the text adventure *Dracula*. Based on the book by Bram Stoker it was written by Rod Pike, author of *Pilgrim*. It will cost £7.95 on cassette.

On the **Martech** stand could be seen *Uchi Mata*, a judo simulation written with the help of Brian Jacks – a 7th Dan expert who has won the British Championship 11 times and holds an Olympic medal in throwing people on rubber mats. The game offers one or two player options and costs £9.95 on cassette and £13.95 on disk.

On the **Rainbird** stand, aside from the excellent *Music System* and *Advanced Music System*, reviewed in our October issue, and *Art Studio*, the cover story for this issue; one could gaze at the stunning graphics of *Starglider* from Argonaut Software for the Atari ST. The good news is that this is under development for the Amstrad CPC range on both cassette and disk, and looks worth waiting for.

Gremlin Graphics was previewing its Christmas range, starting with *Footballer of the Year*. This is not just another soccer simulation (or so they claim!), but sees you starting off at the age of 17 in a Fourth Division Team with £500 and ten goal cards in your pocket, and the footballing world at your feat. The aim is to develop your career until you become Footballer of the Year. It is scheduled for September release at £9.95.

Due early November is *Trailblazer*, in which you play what appears to be a football. The best description is possibly an 'action roll-around'. Following this comes *Future Knight*, a futuristic twenty-level action game set in the ruins of a wrecked star cruiser. At the same time *Avenger* is scheduled for release, an arcade adventure following in the *Way of the Tiger* series.



Archers on cloud 9

The Level 9 stand at the PCW Show was a little different this time round, as it was the company's fifth birthday. By way of celebration the stand had been turned into a kind of museum of computer history. Computer veterans could delight at the sight of a Nascom, while the rest of us took in the power of the Amiga.

But it wasn't all blasts from the past. Mosaic Publishing revealed *The Archers*, written by Level 9, which is an adventure based on the perennial radio serial of the same name. In the game you take the part of the Archers' story editor, making the plot decisions for Eddie Grundy, Jack Woolley, Nelson Gabriel and Elizabeth Archer. (What do you mean, you've never heard of them?) As the plot unfolds you have to face the consequences – which apparently include memos from the controller of Radio 4. The text was written by members of the Archers scriptwriting team, so should have the full flavour of the original.



Looking to the future, Level 9 is working on a multi-user dungeon which runs on networked Amigas; users access it via modem. Codenamed 'Avalon' it could be on-line sometime early next year – and should be well worth logging onto.

£60 Music Machine has sound sampling

One stand at the Olympia show making almost as much noise as that of EMR was Ram Electronics. This might have had something to do with the fact that Ram was showing a product in direct competition with EMR's *Miditrack Performer*.

Ram's £60 *Music Machine* is a Midi-based music system that comes complete with interface, software on cassette or disk, and even a microphone (though the price for the Amstrad version had not been set at the time).

The microphone is included because *Music Machine* offers 'sound sampling', a technique whereby natural sounds can be recorded digitally and subsequently manipulated by the software.

The package also offers eight built-in sounds including drums and piano, and a drum section with real sounds and a rhythm editor. The Midi interface allows you to control fully-fledged Midi synthesisers. And an earphone socket lets you listen to the results in the privacy of your own head.

Further details from Ram Electronics on (0252) 85 0031. We hope to review one soon!

AND THE NEXT SHOW

If you haven't already had enough of computer shows, the next one is scheduled for October 3rd to 5th at the Novotel, Hammersmith, London.

This show is dedicated to Amstrad owners, with more than 75 exhibitors to peruse and annoy. The organisers are predicting a turn-out of around 15,000 enthusiasts – and we will certainly be among them.



187 Upper Street
Islington
London N1 1RQ
Tel: 01-226 0828

THRILLER

Thriller writer Dick Francis is soon to join Frederick Forsyth on the computer screen with Mosaic Publishing's *Twice Shy – The Computer Game.* A traditional adventure game combined with a horse-racing simulation (I guess you've just got to read the book!), *Twice Shy* has been written by the RamJam Corporation.

You take the part of teacher Jonathan Derry who has come into possesion of some intriguing computer tapes – your job is to find out what they do and get them back to the owner. Needless to say there are a host of shady characters from the seamy side of the horse-racing business trying to stop you. If you can make your way to the horse track you can place your bets and watch the race. If you win you return to the adventure with some much-needed cash in your pocket. This part of the game can be played by itself if you want to practice.

Twice Shy will be available on cassette for £9.95. A disk version will follow at £12.95.

DAN DARE PROBLEMS

A little note arrived on our desk from those nice people at Virgin Games. For those of you who haven't already worked it out, loading *Dan Dare* from disk requires **|CPM** and not **RUN"DISC**, as displayed on the packet. Thanks, Virgin!



Screen vision

In between your nightly sessions of game-playing, it may have occassionaly occurred to you that it might be nice to be able to watch your favourite TV programme on Arnold's monitor. Well – now you can, thanks to *Screenvision* from Screens Microcomputer Distribution.

Screenvision is a slimline box that you plug your monitor into, and contains all the circuitry necessary to bring Dallas to an Arnold near you. It costs £89.95, so it might be easier to buy a second-hand telly, but for further details contact Screens on (09274) 20664.

NOT PURE FICTION

This may seem an odd place to find an item about the *45th World Science Fiction Convention*, but there is a special reason. The organisers of *Conspiracy '87*, to give its more manageable title, have asked us to point out that computers will feature quite heavily this time, as there will be a whole suite of rooms at the Metropole given over to them.

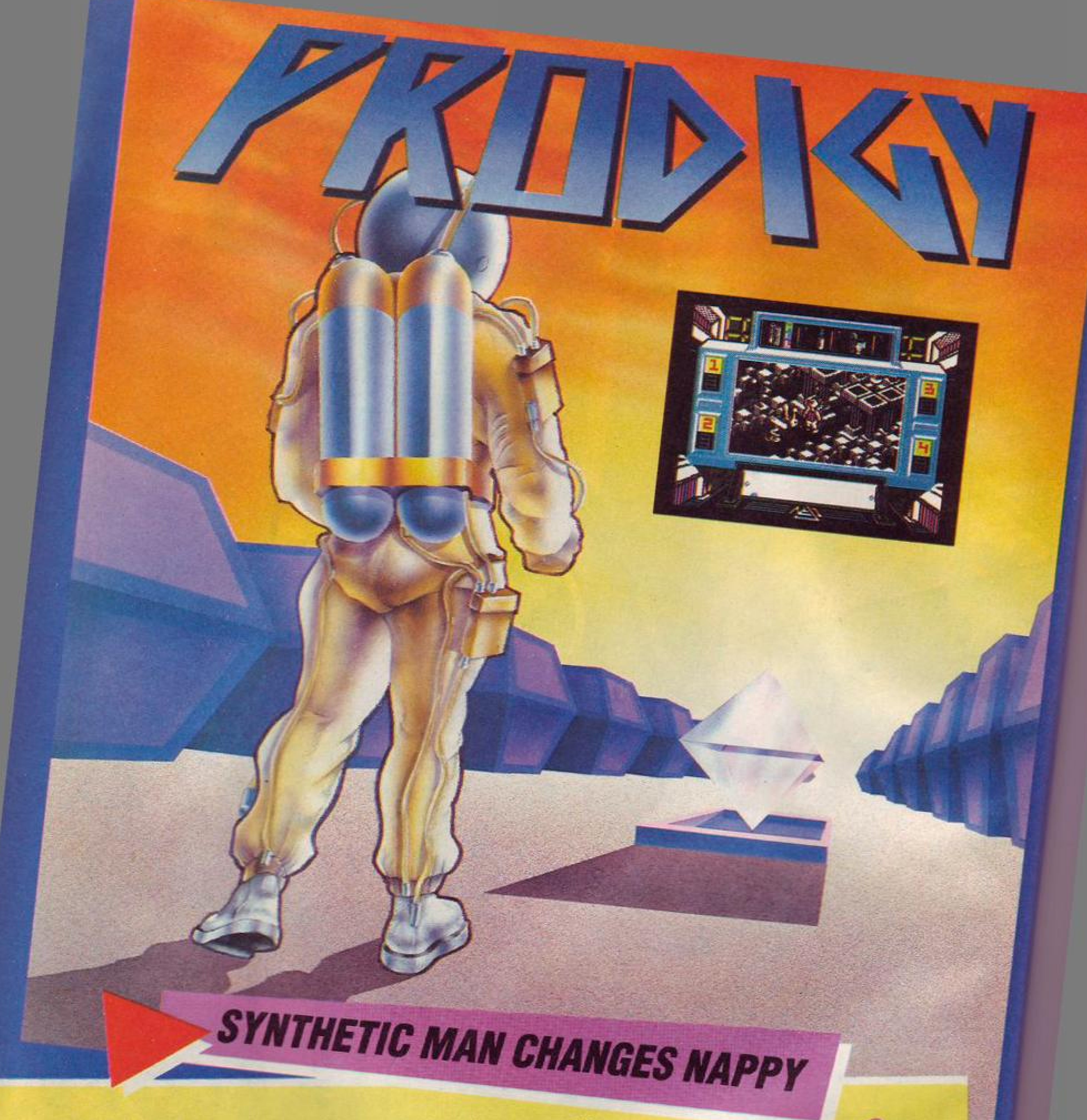
The rooms will contain a number of hardware and software houses stands, together with lectures, discussions and workshops on the relationship between the two fields. Competitions are promised, and all in all this should prove a show with a difference.

The main event at the show is the Hugo Award ceremony, which needs no introduction to anyone remotely interested in Scence Fiction. On the lighter side there is theatre and a costume competition – which has apparently been known to take over six hours. Guests of honour include Doris Lessing, Alfred Bester and Brian Aldiss, while Jim Burns' artwork provides graphic backdrop and Dave Langford (columnist in *8000 PLUS*, amongst other things) provides the humour.

The bad news is that the event doesn't take place for another year – so mark it down for 27th August to 1st September 1987 at the Metropole and Brighton Centre, Brighton.



Jim Burns



SYNTHETIC MAN CHANGES NAPPY

Macabre Mechlabs infested with genetic horrors hinder Solo, a synthetic man, and Nejo, a human baby as they fight their way through the nightmare zones created by Wardlock the Machine Sorcerer to house his ghastly flesh experiments, the Globewels and Bloberites.

An outstanding achievement of graphics and animation, *PRODIGY*, takes you into the Mechlabs of Mechworld where you must guide Solo the Syntleman through the Ice Zone, Fire Zone, Tech Zone and Vegie Zone, in his quest for escape.

Solo has to look after the needs of Nejo, cleaning him up, feeding him and protecting him as they make their way through intelligent mazes, teleporters, buildings with strange geometries and the uncanny vegetation created by the sorcerer Wardlock, who, as a machine being, is malevolent towards organic life. *PRODIGY* is a game which demands compassion, guts and intelligence in ways no other game does.

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WE NEED YOU !

SERIOUS SOFTWARE

Serious Software is now devoted totally to the CPC range, and we need your help!

With our new magazine *8000 Plus* being devoted totally to owners of the PCW 8256 and 8512, we on *AA* can devote all our pages to the CPC range: the 464, 664 and 6128. This means that changes are needed to Serious Software.

Although the PCW became the star of Serious Software, this does not mean that *Amstrad Action* is purely a games mag now. Serious Software still covers what business packages come out for the CPC models, but can devote more space to other aspects of home computing such as programming, type-ins, hints and tips, comms, graphics and music.

We would like your help with Serious Software: after all it's your mag. Send us your **Type-ins**. We are looking for quality listings that show elegant use of Basic or even machine-code. We will print them if they are worth typing in. Use the form on page 96 and remember, we pay for what we print.

Having problems with Basic? Can't persuade your printer to print? Worried about WordStar? Then write to **Problem Attic, Amstrad Action** at the Old Barn. We will print what problems we can, and if we can't answer them ourselves then maybe one of our multitude of readers can – and if they can't they might like to read the reply. But please don't ask us for solutions to games. If we printed those it might spoil the game for others, and there might not be room in *AA* for anything else!

Send us your hints and tips. If you've found any neat tricks to use in Basic, WordStar, Graphic Adventure Creator, Quill, dBaseII, or machine-code – or just want to show off – then send your tips to **Hot Tips, Amstrad Action**, at the Old Barn.

And if you are using your CPC to control your train set, run your business, play in a rock'n'roll band, or anything else that you might like to tell us about, the address is **A Day in the Life, Amstrad Action**, at the same address. The series kicks off with a look at how we produce *Amstrad Action* on Arnolds, but we would rather hear from you. Tell us what you are up to in anything from five to 500 words, and we will let the cat out of the bag. Please include your phone number too, so that we can contact you should we need more details.

CPC owners, this mag's totally for you!

OUR ADDRESS

Address your correspondence to **Type-ins, Problem Attic, Hot Tips** or **A Day in the Life** at:

Amstrad Action, Future Publishing Limited, Brunel Precinct, Somerton, Somerset, TA11 5AH

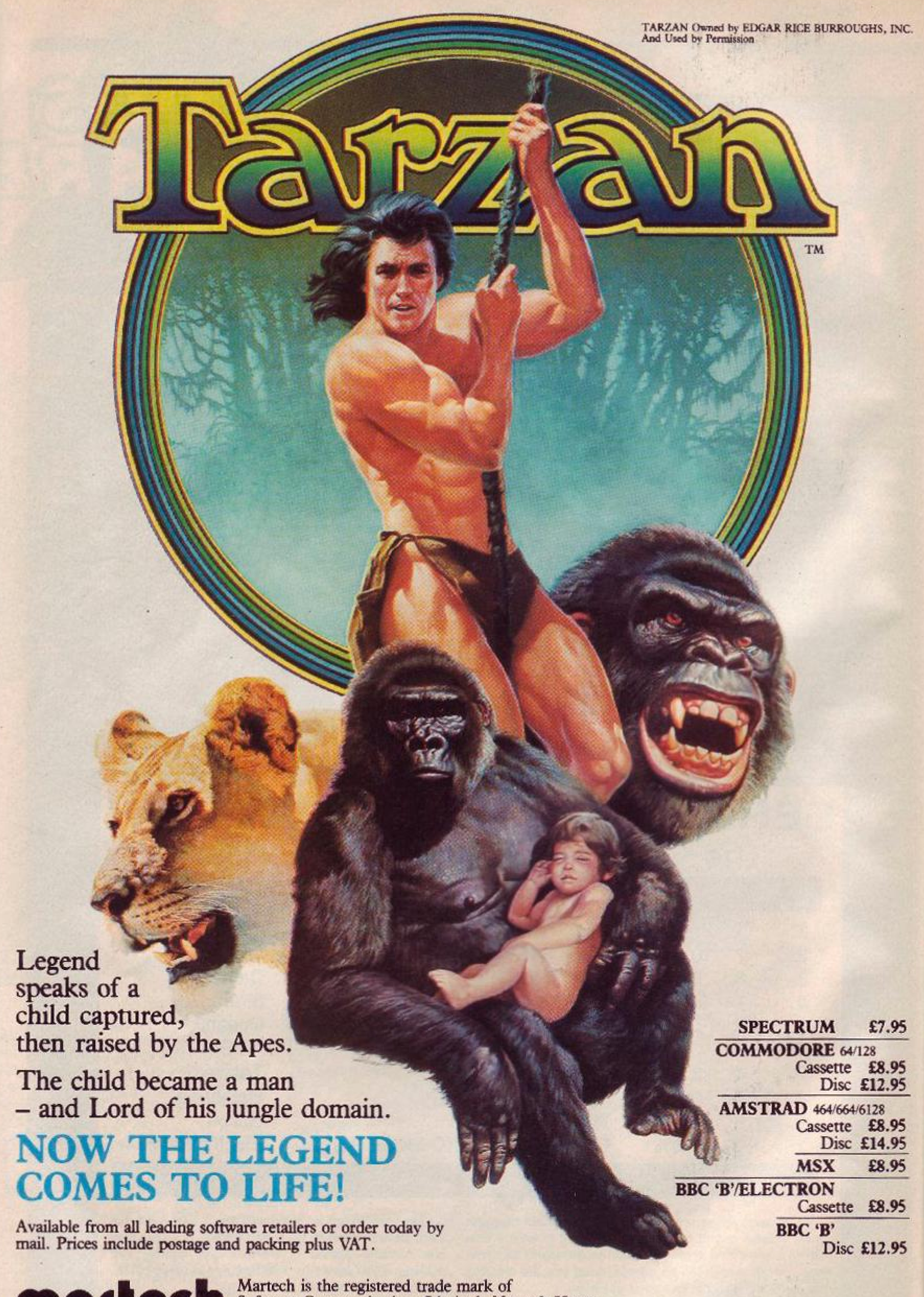
SERIOUS SOFTWARE TOP TEN

The chart created by AA readers

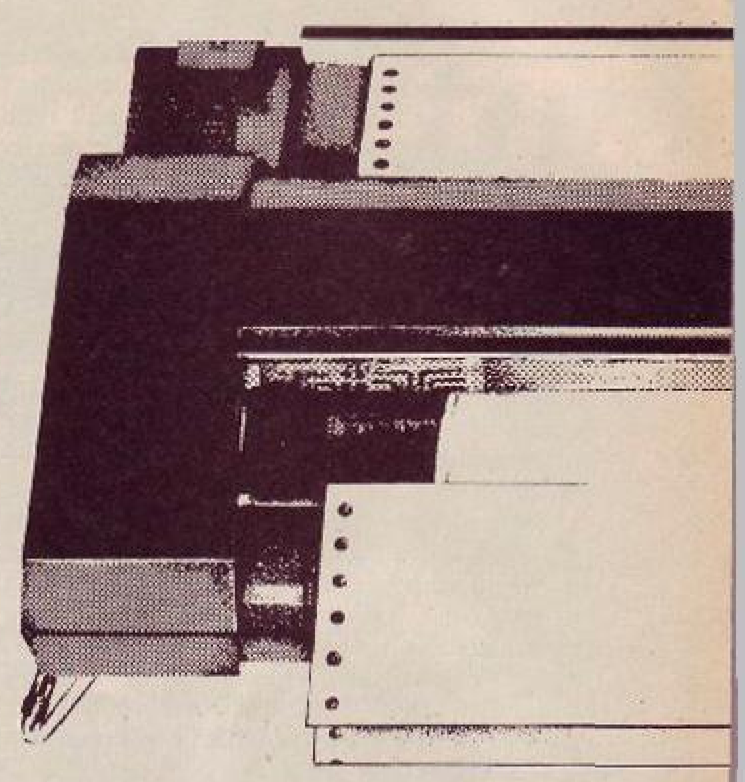
This month	Last month	% of votes	Title	Software house
1.	1	27.4%	GRAPHIC ADVENTURE CREATOR	Incentive
2.	7	10.4%	EASI AMSWORD	Amsoft
3.	8	6.8%	MINI OFFICE 11	Database
4.	—	4.2%	DISCOVERY	Siren
5.	3	4.0%	LASER BASIC	Ocean
6.	2	3.8%	AMX MOUSE	AMS
7.	4	3.5%	TASWORD	Tasword
8.	6	3.0%	MINI OFFICE	Database
9.	9	1.5%	THE QUILL	Gilsoft
10.	10	1.0%	ELECTRIC STUDIO LIGHTPEN	Electric Studio

And *Graphic Advenrure Creator* is stil at number one, with over quarter of you out there reckoning it to be the best thing since sliced bread. What is happening to all these adventures then? Tell us, please, what you are creating on *GAC* and we will let everyone else know.

I'm not going to say anything else about *Easi Amsword*, there doesn't seem to be a lot of point. But *Discovery* has certainly dashed in there, in the number four position. If you want your vote included in these charts, use the form on page 96.


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Absolute Beginners



More on printing this month, as Andrew Wilton continues our crash course in Basic

PART 7

SHORT-CUTS

The PRINT command is one of the most commonly used features of Basic. Because of this, a lot of abbreviations have developed over the years, to save time typing programs in. Right back in Part 1 we saw how you can save time by typing a question-mark instead of the command itself.

The command is still pretty cumbersome to use. Try this little program:

```
10 FOR b=1 to 10
20 PRINT "This is message number ";
30 PRINT b;
40 PRINT " out of a total of ten"
50 NEXT b
```

Even using question-marks, that's a bit long-winded for such a simple operation. If you wanted to do all that printing in one program line, you'd end up typing:

```
?"This is message number ";:? b;:?" out of a total of ten"
```

Notice the way you have to put semicolons to stop Arnold from moving down a line, immediately followed by colons to separate it from the next PRINT command.

In fact, you don't have to do anything so complex. If you want to print a whole load of things on one line of the screen – be they messages, variable values or whatever – you only need one PRINT command for the lot of them. That dreadful line above becomes:

```
?"This is message number";b;" out of a total of ten"
```

This time you don't need any colons, because you're not trying to separate different commands. The only command in the line is the question-mark at the beginning, meaning 'PRINT'. The rest of the line is just the material you want printed – we call this the *printlist*. The semicolons between the different items not only separate them, but also make sure Arnold prints them all on the same line of the screen.

Although PRINT was one of the very first commands we covered in *Absolute Beginners* Part 1, we saw it there only in its simplest form. When we met FOR-NEXT loops a couple of issues back, we came across another use of PRINT. This little program shows both forms of PRINT command at work:

```
10 PRINT "And now for a whole load of numbers!"
20 FOR a=1 to 10
30 PRINT a
40 NEXT a
50 PRINT "That's all, folks!"
```

The PRINT commands in lines 10 and 50 each put a message on screen, while the one in line 30 prints out the value of the loop variable 'a' for each pass through the FOR-NEXT loop.

This much you've seen before in other forms. Now try typing in a new line between lines 20 and 30:

```
25 PRINT "Number ";
```

Note the semicolon at the end of the line. Don't put a colon there by mistake, or you'll miss the point of the exercise.

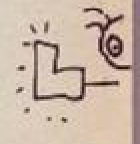
You won't be surprised to find that line 25 prints the message 'Number ' on screen. Line 30 then prints the value of 'a', but on the same line of the screen that the 'Number ' message went on – and this is new. Up till now, each PRINT message has gone on its own separate line of the screen.

Every time Arnold gets a PRINT command, he puts the message (or variable value or whatever) on screen and then moves down a line. He does this because he assumes you'll want the next message printed on a separate line. You can see this very clearly indeed if you add this new line 35 to the program:

```
35 PRINT
```

When you now run the program you'll find it leaves a blank line after each 'Number such-and-such' message. The PRINT command in line 35 makes Arnold move down to the next line of the screen, even though there isn't any message for him to print.

As we've seen, Arnold assumes that he's supposed to move down a line after each PRINT command. Sometimes you won't want him to do this, so you'll have to tell him not to. That semicolon on the end of line 25 tells Arnold to stay on the same line, and this means that line 30 prints the value of 'a' on the same line as each 'Number ' message.



IF ...

Let's use our new knowledge of printing straightaway. Type this program in and run it:

```
10 FOR c=1 TO 10
20 PRINT "There will be ";10-c;" more messages like this"
30 NEXT c
```

Mathematically, this is always going to be right. The expression '10–c' in line 20 always works out as the number of messages still to be printed. Grammatically though, it's got one slight problem: the last message but one will read, 'There will be 1 more messages like this', and that's not terribly good English.

Edit line 20 and add a new line 25, so that the two run as follows:

```
20 IF d<=5 THEN PRINT d;"is less than or equal to 5" ELSE
PRINT d;"isn't"
```

Now Arnold gets it right, and you get your first look at three extremely powerful commands – IF, THEN and ELSE. These give you much more control over Arnold than you've had so far.

Up till now, Arnold has done precisely what you told him to do. He hasn't been at all intelligent about this: he's just blindly followed your orders. With IF, THEN and ELSE, all this changes. If you want Arnold to do something in a particular set of circumstances only, you can tell him so. The command 'IF a=40 THEN PRINT b' tells Arnold to print the value of the variable 'b', but only if 'a' has a value of 40. If 'a' does not have a value of 40, then Arnold ignores the PRINT command altogether.

Suppose we had a line reading 'IF a=40 THEN PRINT b'. On its own the command 'PRINT b' would tell Arnold to display the value of the variable 'b' on the screen, but that 'IF a=40 THEN ...' qualifies things. It tells Arnold that he should obey the 'PRINT b' only if 'a' has a value of 40.

We call 'a=40' the *condition* of the IF-THEN command. Don't mistake it for an assignment command; they may look similar, but conditions and assignments are completely different. The condition 'a=40' doesn't change the value of 'a' – it just tests it.

When Arnold comes across an IF command, he *evaluates* the condition. That is, he checks to see whether or not it's true. If the condition is true – if 'a' is equal to 40, or '10–c' is equal to 1 in the earlier example – Arnold finds the command after THEN and performs it.

So much for IF and THEN, but what about ELSE? Well, just as THEN tells Arnold what to do if the condition is true, ELSE tells him what to do if it's false. In line 25 above, the THEN command tells him to print the first message while the ELSE tells him to print the second one. He chooses between them using the condition.

If the condition '10–c=1' is true – if '10–c' does equal 1, in other words – Arnold prints the first message, as the THEN command instructs him. If it's false, however, he ignores THEN and the PRINT command which follows it. Instead he prints the second message, because that's what ELSE tells him to do.

Let's look at another example of IF-THEN-ELSE programming. This time there's a very important job for an IF-THEN command to do. First of all, here's the listing without an IF-THEN:

```
10 a=24
20 FOR b=4 TO 0 STEP -1
30 PRINT a;" divided by ";b;" equals ";a/b
40 NEXT b
```

That 'STEP –1' means that the value of the loop variable 'b' counts downwards, in this case from four to zero. When the value of 'b' gets to zero, Arnold gets into problems with line 30.

The last item in line 30's printlist is 'a/b' – the value of 'a' divided by the value of 'b', in other words. Since 'b' is zero on the last run through, Arnold tries to divide the value of 'a' by zero and print the result. He can't do this properly, because dividing a number by zero is a mathematical impossibility. Instead he prints up the error message 'Division by zero', along with a nonsense value for 'a/b'.

By substituting in a new line 30 with a suitable IF-THEN command in it we can avoid this problem. What we want is a line which tests for the loop variable 'b' being equal to zero, puts up a special message if it is zero, or just carries on with the division if it isn't.

You should now have a fair idea what the new line 30 is going to look like. It will be something like 'IF (b is zero) THEN (print a special message) ELSE (do what the old line 30 did)'. See if you can work out a finished line 30 for yourself.

MORE CONDITIONS

We've seen how Arnold can cope with IF-conditions like 'a=40' or '10–c=1', but he's a lot more flexible than this. Try typing this program in and running it:

```
10 FOR d=1 TO 10
20 IF d<5 THEN PRINT d;" is less than 5" ELSE PRINT d;"
isn't"
30 NEXT d
```

The sign '<' is the *less-than* sign. So 'IF d<5' reads 'if d is less than 5'. When 'd' is less than 5 Arnold obeys the first PRINT command and the rest of the time he obeys the second one.

There's a corresponding '>' sign which means *greater-than*, and together these two signs are called *inequalities*. (To remember which is which, you can think of a megaphone: small sound at smaller end, big noise at big end.)

Notice what happens in the above program when d is equal to 5: Arnold obeys the second of the two PRINT commands, because 'less than' is a strict condition. If you mean 'less than or equal to' you must use the less-than and equals signs together, like this:

```
20 PRINT "There will be ";10-c;
25 IF 10-c=1 THEN PRINT "more message like this" ELSE
PRINT "more messages like this"
```

You can do the same with the greater-than and equals signs, and in both cases it doesn't matter which way round the signs go: '>=' and '=>' mean the same thing.

The most useful combination of signs is *not-equal*, which you make with the greater-than and less-than signs like so: '<>'.

Often you'll find you can get the same results two different ways with an IF-THEN-ELSE command. As far as Arnold is concerned, 'IF a=1 THEN b=1 ELSE b=2' is the same as 'IF a<>1 THEN b=2 ELSE b=1'.

SUMMARY

The PRINT command normally puts each printed message on a new line. If you follow the message with a semicolon (;) Arnold will print the next message on the same line.

You can print a series of messages with one PRINT command, putting them in a *printlist*.

The commands IF, THEN and ELSE let you specify alternative commands to be performed in different circumstances. A line using IF goes 'IF (condition) THEN (first command) ELSE (second command)'.

The condition is something like 'a=30' or 'b<10', and tells Arnold how to choose which command he should obey – the first one or the second, that is. If the condition is true – if 'a' has a value of 30 or 'b' has a value of less than 10, in the two examples – then he will obey the first command. Otherwise, he'll obey the second one.

The 'ELSE (second command)' part of an IF-THEN-ELSE line is optional. If there's no ELSE command and the condition is false, Arnold will just go on to the next line.

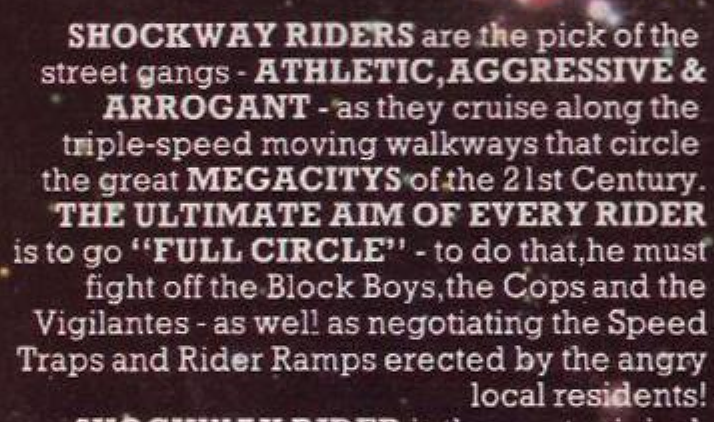
Types of condition (with some examples):

=	equals	
<	less than	('a<b' means 'a is less than b')
>	greater than	
<= or =<	less than or equal to	('a<=b' means 'a is less than or equal to b')
>= or =>	greater than or equal to	
<>	not equal	('a<>b' means 'a isn't equal to b')

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BOOTING

If you have followed this series through from Part One, you will be pleased to hear that you are now in a position to make some practical use of your knowledge of CP/M – by doing some 'housekeeping'. This doesn't mean you have to get the Hoover out, but refers to the practice of keeping your disks in order and using them efficiently for storing programs and documents.

When you buy a program – a word-processor, a database or a computer language for example – what you are buying is a 'master' disk that contains the program files you need, and probably some sample files and maybe a tutorial to set you on your feet. It is good practice to make both a 'backup' of the master disk (or disks), so that you don't corrupt it, and a 'work' disk which you use from day to day.

We have already touched on the subject of backups in Part Three of this series. We made a backup of your CP/M master disk so that you didn't have to keep using your only copy of the operating system. To recap briefly, we used the Disckit3 program (or Disckit2 if you have CP/M version 2.2 rather than CP/M Plus) to copy the contents of your master disk onto a blank disk.

The Disckit programs are ideal for making backup copies of master disks as they actually copy disks exactly: bit for bit as they appear on the master disk. To make a backup copy, first insert your CP/M master disk into the built-in drive and boot up CP/M. Then enter **DISCKIT2** or **DISCKIT3** according to which version you have. A menu appears on the screen which is fairly self-explanatory – except that the numbers for activating each option refer to the function keys and not the numerical keys along the top of your keyboard.

So press the **f7** function key to copy a disk. A new menu appears asking you which drive contains the disk you wish to read from; this is the disk you will be copying from. So press **f8** for the built-in drive. The next menu asks where the disk you wish to write to is to be found: the disk you wish to copy to. If you have only one drive then press **f9**, but if you have a second drive attached press **f6**.

The screen should clear, and ask you to *insert the disc you wish to WRITE*. Remove your CP/M master disk and insert the program disk you want to copy, and then press any key. From then on just follow the instructions on the screen. If you have a single-drive system you have to keep swapping the two disks back and forth as Arnold reads chunks of data from the source disk into memory, and then copies it back out to the destination disk. If you have two drives you can sit back and watch the drive lights flash back and forth as Arnold reads from one disk and writes to the other.

In either case it is a good idea to make sure the protection tabs on your master disk are in before you start, in case you get muddled up between source and destination at some point after all, Arnold doesn't know the difference!

WORK DISKS

You now have a backup disk, which is a direct copy of the master disk. Put your master disk away somewhere safe (if it's really important, in a different building in case one burns down!). You won't have to use the master disk again unless something goes badly wrong with your backup.

Put your backup copy into your built-in disk drive and enter **DIR** to look at the disk's file directory. It will probably contain quite a number of files, many of which you are unlikely to use in day-to-day work and are really just taking up valuable disk space that could be better used.

In particular there may be various files labelled README or SAMPLE, or with .DOC or .TXT extensions, that are there to help the novice use the program; they are meant to be discarded once you know what you are doing. The idea of a 'work' disk is to prepare a disk that contains only the files you need from day to day, hopefully leaving you enough space on the disk to store the documents and data you will be creating while you work.

The first thing to do is decide which files you are going to need. These may be listed in the documentation supplied with the package, but as a general rule of thumb you will probably need most of the files with a .COM extension.

For example, if you are working with WordStar you are going to need WS.COM as this contains the main program itself. You are also likely to need the 'overlay' files – those with an .OVR extension – as these are called by the main program when needed. There may well be a short file with the .SUB extension which should be on your work disk; we will look at Submit files later in this series. Don't be too concerned about missing any vital files out, as the program should throw up an error message if it finds a file missing: a message such as *WS1.OVR missing* makes its point quite clearly.

It is also a good idea, if you have the space, to copy DIR.COM from side one of your CP/M system disk onto your work disk (or STAT.COM if you are running CP/M version 2.2). Having these files on your work disk lets you easily find out how much space you have left without the inconvenience of continually swapping disks. Having PIP.COM would be useful too, as you could copy files from disk to disk without too much aggravation.

CREATING A WORK DISK

The first stage in creating your work disk is to format a new, blank disk and copy the system tracks onto it so that it is a 'boot disk' – containing CP/M itself. This is done, again, with the help of the Disckit programs. Run **DISCKIT2** or **DISCKIT3**, but this time press **f4** to format a disk. Press **f9** from the next menu, to format your work disk in 'system format'; and the **f8** or **f5** key according to the number of drives you have. Remember your built-in drive is *A:*, and your second drive, if you are so privileged, is *B:*. Follow the instructions on the screen and sit back as your new disk is formatted.

You should now have a freshly formatted disk, pristine clean and ready for the files necessary to turn it into a fully-fledged work disk.

So how do you copy the files across? by using the PIP command of course, as we learnt in Part Four last month. Start by pipping across the PIP.COM file itself, and DIR.COM from your CP/M master disk. Insert your CP/M master disk into the built-in drive and enter:

```
A>pip
*b:=pip.com
*b:=dir.com
*
```

Now enter **DIR B:** and you should see these two files on the directory of your work disk. You've now got all you need to do the rest using just your work disk, and can put your CP/M master disk away as it won't be needed any more.

The next stage is to PIP the files you have decided you are going to need from your application program backup disk. You should know enough about PIP to do this by yourself by now.

Remember to keep an eye on how much free space you've got left on your work disk: you want to leave enough space for the files you are going to create when you actually sit down to some real work, otherwise the whole exercise will be pointless! Remember too that you can always ERAse PIP.COM from your work disk when you've finished, and maybe DIR.COM (or STAT.COM) too; though this would be a shame as it would mean you wouldn't easily be able to check for free space later on.

By way of example here is the directory of one of the work disks we use on *Amstrad Action*.

```
A>dir
A: WS       COM : WSOVLY1  OVR : DUMRAVE  BOB : DUMURD   DUB
A: NEXOR    BAK : CPM      14  : NEXOR    14  : DAYIN    14
A: STUDIO   14  : ABSOLUTE 14  : FATCPM   12  : PAGEBOTS BAK
A: BOTGEN   BAK : PAGEBOTS 14  : BOTGEN   BAS : PAGBOT   BAK
A: DAYIN    BAK : PAGBOT       : FRAITIC  14  : EDLINES  BAK
A: EDLINES  14  : REVOLUTE BAK : REVOLUTE 14  : CHEAT    14
A: SPLIT    14  : TEMPEST  BAK : TEMPEST  14
```

It is a WordStar disk, containing CP/M as well so that we can 'boot' directly from the disk, but as you can see we don't put PIP.COM or STAT.COM on as well. This is partly to save space, and also because there is another, rather irregular, way of finding out how much free space there is on the disk. First you reset the Amstrad by pressing **CONTROL, SHIFT** and **ESC** at the same time, and then you enter the Amsdos command **CAT** (short for catalogue). Amsdos is the Amstrad disk operating system, considerably more basic than CP/M, that is built into your Arnold if you have a disk drive attached. Fortunately the Cat command lists the files on your disk together with their length in kilobytes and the amount of free space left on the disk. It is best to do this before you start work for the day, as you can then boot up CP/M afterwards by entering |**CPM**.

MAKING A LIBRARY

Once you are actually using your work disk, you will find that it rapidly fills with the document or data files that you create while using the word-processor, spreadsheet or whatever program you are running. Many programs, including WordStar, create backup files of your work every time you save a document. These are essentially your previously saved file renamed with the .BAK extension. The backup of the document you are working on at the time should be retained in case of problems, but other files with the extension .BAK can be erased to make more room on the disk.

However, even after you have erased surplus backup files, a time will come when your work disk is totally full. At this point you have a choice: either make a new work disk or create a 'library' of older files that you might need to refer to again, or need just 'for the record'. Which choice you make depends on your work pattern. If you are a writer, for example, at any one time you really only need to work on your current document. Older documents can be filed away for reference. If you are running spreadsheets, on the other hand, you might constantly need to look at a variety of spreadsheets and so need several work disks.

A 'library' disk is created in much the same way as a work disk, only you don't bother to put the program files themselves on the disk. A copy of PIP.COM and DIR.COM are quite useful files to have on library disks, but not vital. So you could end up with nearly 170K space for your documents. If your work is easily divided into categories – a writer, for example, could have novels, short stories and correspondence – then it might be best to create several library disks, using one for each category.

So, with careful use of PIP and ERAse on your work disks and library disks you should always have enough room on your disks, and should always be able to find a file when you want it. There's nothing like an organised collection of disks for making your working life easier.

Next month we shall look at more of the wonderful things you can do with the PIP command, and at some of the other files to be found on your CP/M master disk. And yes, I know that is what we were supposed to be doing this month, but you'll just have to wait!

PROBLEMS WITH A CPC664

If you are the owner of a CPC664 you are unfortunately doubly disadvantaged – you have to live with CP/M 2.2 and you don't have a copy of DISCKIT2. However, your system disks do contain other programs that fulfil the same function:

FORMAT is used to format a blank disk in system format. The program is stored in a file called FORMAT.COM. If you wish to format your disk in Data Format – without the system tracks – then use the qualifier: **FORMAT D**.

DISCCOPY is used for copying disks if you have a single-drive system and, like DISCKIT, will format the disk too if this hasn't been done already. Its sister command is **COPYDISC**, which is used if you have two disk drives.

COPYING FILES WITH CP/M 2.2

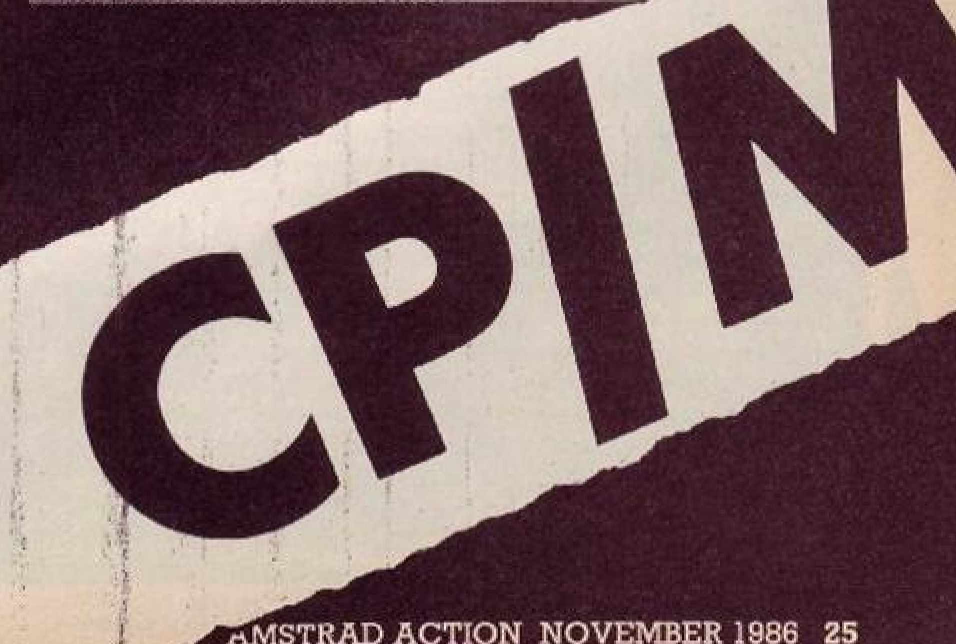
As we mentioned in Part Four of this series, copying files from one disk to another using PIP under CP/M 2.2 is possible only if you actually have two disk drives. If you only have one drive you are a bit stuck, but thankfully Amstrad has supplied another program, FILECOPY.COM, specifically designed for this purpose. So to copy a file under CP/M 2.2 you use the command **FILECOPY filename**.

The filename can be ambiguous, so it is quite OK, for example, to say **FILECOPY *.COM** if you wish to copy all the command files from your source disk. The screen prompts you quite clearly when you must change disks but again, it is up to you to keep track of which is the SOURCE disk and which the DESTINATION. (It might be wise to use the write-protect tab on your source disk.)

COPY-PROTECTED PROGRAMS

Making working copies of your programs using PIP is straightforward unless the master disk is 'copy-protected'. This means that a clever bit of code on the master disk prevents you from copying the files – a system devised to hinder software pirates capitalising on other peoples' work.

It also makes it difficult for people like us, who want to make legitimate copies for backup and work disks. Unfortunately there is little that you can do about copy-protected programs, unless the protection is fairly basic. Try doing a DIRectory of the master disk. One easy form of protection is simply to label files **filename*, which prevents others from using the *.* format for PIPping across all the files on a disk. This can be circumvented just as easily by renaming the appropriate files.



YOUR LOFTIEST QUESTION ANSWERED.

PROBLEM ATTIC

We've had a lot of letters in the Problem Attic postbag this month asking about hardware scrolling, and how it can be used in Basic programs. Well, this is rather too complicated a subject for a straightforward three-paragraph reply – three pages would be more like it. Normally at such times we just mutter 'Not enough space' and move on to the letters we can answer briefly.

It's a pretty interesting subject though, and it neatly ties in with a letter in last month's PA about *Ghosts and Goblins*. Just this once then, we're going to give a complicated subject the space it needs – but you needn't think we're going to make a habit of it.

Vertical scrolling is very easy, and there's no real problem adding it to Basic games. This program illustrates scrolling the screen up and down.

```
10 x.coord-POS(O#):y.coord-VPOS(#O) 'stores cursor
position
20 LOCATE 1,1 'moves cursor to top of screen
30 PRINT CHR$(11) 'moves cursor up one line, forcing
screen to scroll down
35 WHILE INKEY$-"":WEND 'waits for you to press a key
40 LOCATE 1,25 'moves cursor to bottom of screen
50 PRINT CHR$(10) 'moves cursor down one line, forcing
screen to scroll up
60 LOCATE x.coord,y.coord 'restores previous cursor
position
```

This doesn't do anything very impressive, but you should be able to get the general idea from the comments on each line.

Horizontal scrolling isn't anywhere near so easy. If you want to scroll the screen sideways from Basic you'll need to use the OUT command, which sends a number to a peripheral chip. That'll be enough to put quite a lot of people off, but it isn't too difficult. The only problem is that it messes up the way Arnold writes things to the screen. This listing should give you an idea what I mean:

```
10 MODE 2
20 FOR a-1 TO 25
30 CALL &BD19    'could use FRAME on 664/6128
40 OUT &BC00,13
50 OUT &BD00,a
60 NEXT a
70 LOCATE 1,1
80 PRINT "This should be in the top left corner"
```

As you'll see if you run this, Arnold can't cope with the changes you've made. All printing carries on as if the screen was still unscrolled. To get your screen back to normal you can either type MODE 2, or force a vertical scroll using the cursor keys.

This last point is another reason why the OUT method of horizontal scrolling doesn't work too well. Every time you force a vertical scroll using the simple method we started with, you undo any horizontal scrolling you've done using OUT.

Horizontal scrolling is much easier if you know a little machine-code. Two firmware routines make the programming very easy indeed, and they let Arnold know what you're doing so he can print to the screen properly.

NON-TECHNICAL

To start with, here's a Basic program which uses the firmware routines. You don't need to know a thing about machine-code to use them, but there's an explanation afterwards for anyone who's interested.

```
10 DATA &CD,&0B,&BC,&23,&23,&C3,&05,&BC
20 DATA &CD,&0B,&BC,&2B,&2B,&C3,&05,&BC
30 oldmem-HIMEM:MEMORY (oldmem-16) 'makes
room for machine code
40 FOR a-HIMEM+1 TO oldmem 'this loop
50 READ b:POKE a,b          'pokes in
60 NEXT a                   'the machine code
70 scleft-HIMEM+1:scright-HIMEM+9
80 FOR c-1 TO 100
90 CALL &BD19   'same as 664/6128 FRAME command
100 CALL scleft 'scrolls left
110 NEXT c
120 FOR c-1 TO 75
130 CALL &BD19
140 CALL scright 'scrolls right
150 NEXT c
160 LOCATE 1,1
170 PRINT "This IS in the top left corner"
180 MEMORY oldmem 'reclaims space used for machine code
```

The important bits of the program are lines 10 to 70 which set up the scroll routines, and line 180 which dismantles them after you've finished with them. If you start your program with the commands in lines 10-70 and finish with the MEMORY command from line 180, you can use the commands *CALL scleft* and *CALL scright* whenever you want to scroll the screen left or right.

BOFFINS ONLY

That's all you need to know to use the routines from Basic. If you're interested though, here's how the first routine disassembles:

```
scleft:  CALL &BC0C      ;SCR-GET-LOCATION
         ;No entry conditions -- on exit, HL
         ;contains the current 'screen offset'.
         INC  HL         ;Increases HL
         INC  HL         ;by two.
         JP   &BC05      ;SCR-SET-OFFSET
         ;Value in HL is used as new 'screen
         ;offset'.
```

The second one's the same, but with DECs instead of INCs. In other words, one increases the 'screen offset' by two and the other decreases it by two.

Clearly the screen offset is the key to horizontal scrolling – increase it by two to scroll left a fortieth of a screen's width, or decrease it by two to scroll right. It's also, incidentally, the key to vertical hardware scrolling from machine-code. Increase the offset by 80 (decimal) to scoll up one line, or decrease it similarly to scroll down. This accounts for something you'll have noticed with the Basic horizontal-scroll program: scrolling left or right by a whole screenful also scrolls the screen up or down one line.

None of this tells you what the screen offset actually is, but we'd be here all day if I tried explaining that. If you're really keen to know about such things get hold of Amsoft's *CPC Firmware Guide*, read it and inwardly digest it. Once you've done that, you'll be ready for the technical stuff that follows.

GHOSTS AND GOBLINS

Yes, it's that horrifying saga of colour modulators producing

YOUR LOFTIEST QUESTION ANSWERED.

PROBLEM ATTIC

black-and-white pictures again. This isn't a change of subject though, since it turns out that a clever scrolling technique is the culprit.

For those who missed last month's Problem Attic, the tale goes like this. Software house Elite produced the *AA* Rave game *Ghosts and Goblins* a couple of months back, believing it to be compatible across the CPC range. Imagine their (and our) surprise when it turned out to be incompatible with Amstrad's TV modulator, producing only a black-and-white picture even on a colour TV set.

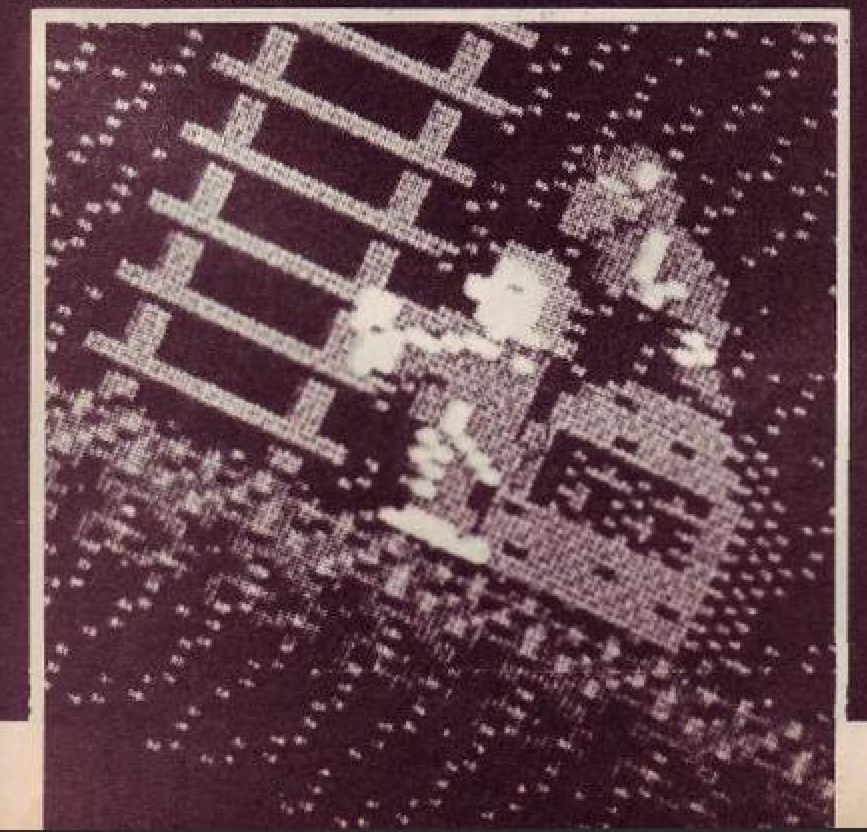
Compatibility problems between machines happen all the time, but this was the first time we'd heard of modulator problems. The modulator simply converts the RGB (red-green-blue) signal meant for a colour monitor into the modulated signal which most TV sets require through their antenna socket. For *Ghosts and Goblins* to mess up the modulator output, it had to be doing some very strange things with the RGB signal.

Needless to say, it was. To be precise it was moving the 'logical' screen (ie. the picture of the ghosts, goblins etc) backwards and forwards across the surface of the 'physical' screen (ie. the hard glass bit you look at). You can see this effect for yourself, with this little bit of Basic. It replaces lines 80-180 of the poked-in machine-code horizontal scroll listing, so these must be deleted before typing in the new lines.

```
80 FOR a-1 TO 50
90 CALL &BD19
100 OUT &BC00,3:OUT &BD00,5
110 CALL &BD19
120 OUT &BC00,3:OUT &BD00,&8E
130 NEXT a
140 MEMORY oldmem
```

This looks ugly, and would probably give you a headache if you stared at it for too long. If you're looking at it through a modulator, it should also look distinctly colourless. (I don't have a modulator to test this, but I'm pretty sure of it.) Now you know what *Ghosts and Goblins* does, so the next question is 'Why?'

Pixel detail from *Ghosts'n'Goblins*

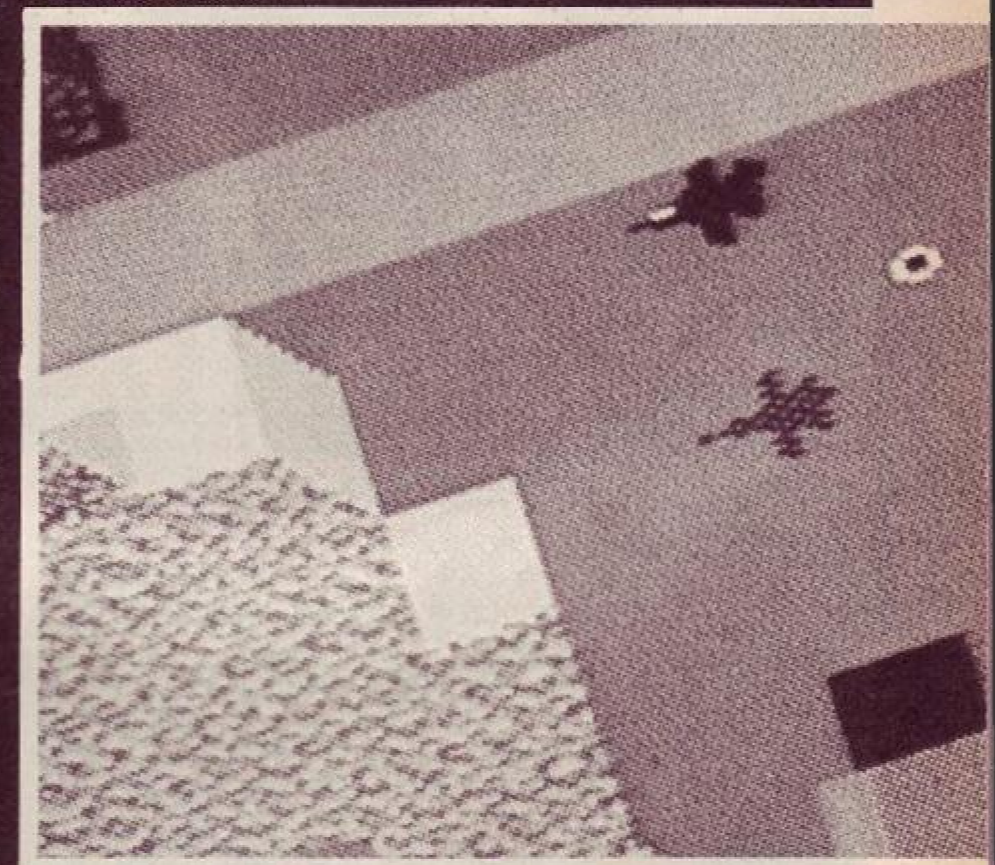


PROBLEMS WITH SCROLLING

A couple of issues ago I made some bold statements about Arnold's hardware scrolling capabilities compared to those of other machines. In fact, Arnold's hardware scroll does have one slight problem: it's too fast.

As you may remember, the horizontal scroll routines can only scroll the screen a fortieth of its width at a time. That's not just the way the routines are written: the hardware simply can't manage a smaller scrolling action.

Fast scrolling on Vortex's *TLL*



To get a smooth continuous scroll you need to make one scrolling movement every fiftieth of a second – the timing for this is handled in our scrolling programs by those CALL &BD19 statements. If there are fifty movements per second, and they each have to be at least a fortieth of the screen width, you're clearly going to scroll past a whole new screen of landscape in less than a second.

This is too fast for anything much more than reflex gameplay, though Vortex's *TLL* did quite well using these techniques. Another notable hardware scroller was Gremlin's *Thing on a Spring*, though there were slight problems at the screen edges on this one.

For the most part games programmers use either software scrolling or what you might call 'burst' scrolling. Software scroll only works well on very small windows (eg *Rambo, Stainless Steel*) and causes an ugly rippling effect if used on large areas – *Bounder* and the tank stage of *Beach-Head* are cases in point.

The preferred technique is 'burst' scrolling – keeping the screen fixed until the player reaches the edge of it, and then fast-scrolling the next screen into position. Prime examples of this are *Green Beret* and *Thrust*. This is still far from perfect, and it was an attempt to improve on this that brought *Ghosts and Goblins* its problems.

THE 'SOLUTION'

The aim in *Ghosts and Goblins* was to provide a slow hardware scroll, so that the 'burst' scrolling wouldn't be so abrupt as it is

PROBLEM ATTIC

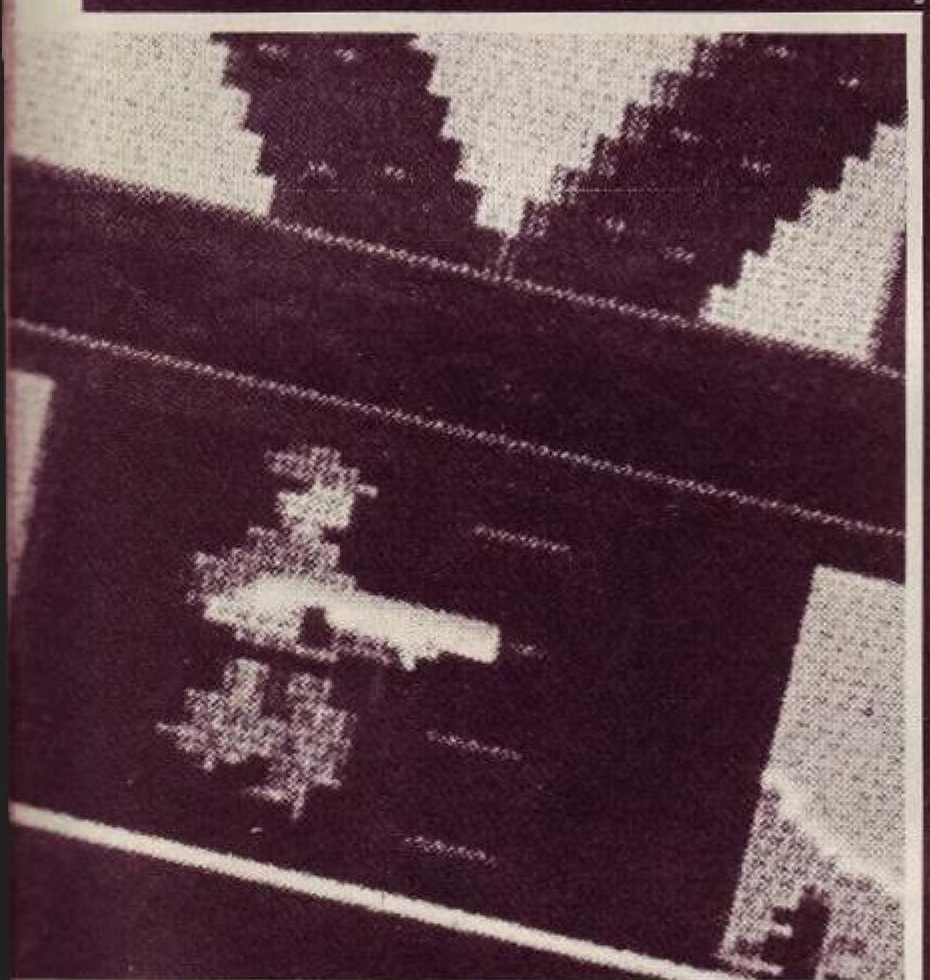


in, for example, *Green Beret.* The method used involved both scrolling the screen and moving it.

If you've typed in the program so far, you can get a *Ghosts and Goblins*-style scroll by altering line 100 as shown below. If you haven't, here it is in full:

```
10 DATA &CD,&0B,&BC,&23,&23,&C3,&05,&BC
20 DATA &CD,&0B,&BC,&2B,&2B,&C3,&05,&BC
30 oldmem-HIMEM:MEMORY (oldmem-16)
40 FOR a-HIMEM-1 TO oldmem
50 READ b:POKE a,b
60 NEXT a
70 scleft-HIMEM-1:scright-HIMEM+9
80 FOR a-1 TO 50
90 CALL &BD19
100 CALL scleft:OUT &BC00,3:OUT &BD00,5
110 CALL &BD19
120 OUT &BC00,3:OUT &BD00,&8E
130 NEXT a
140 MEMORY oldmem
```

The OUT commands in lines 100 and 120 move the screen left and right by an eightieth of its width – you'll have seen this already if you've been typing things in and running them as you've been reading. (Note that 'moving' is not the same as 'scrolling' – I'll explain the difference in a minute.) The difference now is that 'CALL scleft' in line 100.



Green Beret uses Burst scrolling

The CALL in line 100 scrolls the screen left by a fortieth of its width, and the OUTs move it back to the right by an eightieth: net result, a scroll/move of an eightieth to the left. A fiftieth of a second later the OUTs in line 120 move the screen to the left by an eightieth. After another fiftieth of a second line 100 scrolls/moves the screen another eightieth to the left, and so on.

If you've still got the default colours on screen you won't be able to see this happening: it just looks like a slow smooth scroll. Set the border and *screen background to different* colours and you'll be able to see what's happening quite clearly – the left and right edges of the screen blur where it's being moved rapidly from side to side. Here 'moving' literally means changing where the detailed picture part of Arnold's display appears on the glass tube of the monitor.

NOW YOU TRY IT

This method is a very nice way of halving the scroll speed without losing smoothness, and could usefully be applied to Basic versions of *Scramble* and similar scrolling games. You'd need to do the timing with the EVERY command rather than using CALL &BD19 or FRAME, and make sure the scroll/move commands were on a higher timer priority than any other interrupt-driven sequence you had running.

Customised boot

D Herrington (September) should proceed as follows: Type `|cpm` to boot a disk containing Setup.com (the system disk supplied or a working copy). Type `setup`. It replies:

```
Setup
Initial command buffer: =
Is this correct (Y/N):_
```

Answer no.

```
Enter new initial command buffer:_
```

Answer `stat *.* ^M`. The ^M means Return, but to get it into the buffer you have to enter it this way because the Return key is used to terminate your entry (see page 5.24 in the 664 manual). Setup asks lots more questions, to which the answers are all yes unless you want to change the sign-on message. 'Stat *.*' is just an example, of course.

A Greenwood
St Helens

Another good idea is to blank off the blurred columns at each side alternately – the right-hand one at line 100 and the left-hand one at line 120. If you set these to the same colour as the border you cut the apparent screen width down a little, but the loss of that unsightly 'edge-flicker' more than makes up for this.

If you can make a decent scrolling game out of any of this, why not send it in to Type-Ins? Make sure you keep it short – under 3K if possible – and give it plenty of grab-factor. Otherwise it's up to you: knock our socks off and we'll print your program!

BUT BEAR IN MIND ...

There are problems with this kind of technique. For one thing, OUTs like the ones in lines 100-120 bypass Arnold's firmware. In this case they work on all the machines I can find to try them on, but you can't run crying to Alan Sugar if you get compatibility problems – Amsoft advises software houses not to use them.

More seriously, it looks like Amstrad's modulators can't produce a colour TV signal out of this kind of monitor input. One (non-Elite) programmer I met at the PCW show put it down to the poor quality of the Amstrad units. If this is true it's not exactly surprising: after all, Amstrad keeps costs down by cutting specifications fine. The modulator works okay for normal purposes, and Amstrad can hardly be blamed if it can't cope with *Ghosts and Goblins.*

That's certainly not to say that Elite is to blame: indeed I'd say the company has been been unlucky. I don't think anyone in the industry expected this kind of problem, and other houses are just grateful it didn't happen to them.

Moral: Those who live on the cutting edge of technology will be sacrificed upon it, as Adam Osborne said. Or they get a bit of bad publicity, at any rate.

INFILTRATOR

CREATED BY CHRIS GRAY

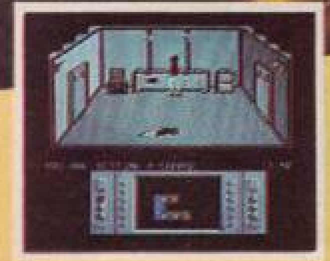
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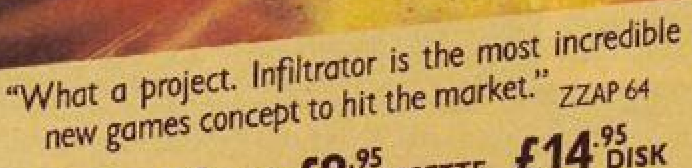
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Arnold sends the kids to school

***AA* last looked at educational software for the Arnold back in April. We'll start at the bottom this month, checking out a few packages for pre-school tots, and next month see what's on the syllabus for older learners.**

Trio
Piranha, £9.95 cass, £14.95 disk

Been fishing without luck for Amstrad programs to educate your offspring? Reaction has had a good number of letters from parents adrift in this sea.

Piranha to the rescue! 'There's a hole in the market,' observed someone at this 'small but lethal' software branch of the august Macmillan publishing house. Piranha is sinking its teeth into the games market and also taking a first educational venture with *Trio*, a suite of three learning games by Reid Baird aimed at younger children.

In *Sam Goes Shopping* the child has to go to the correct on-screen shop and the correct department within it to find a certain item – a handbrush or a singing bird or a plump haggis or a clockwork train.

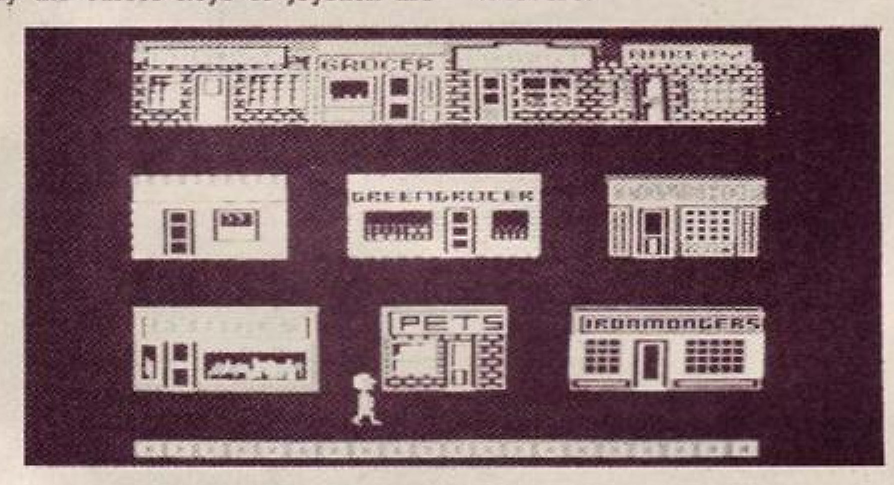
The task is more than child's play: the instant the instruction screen cleared and I found myself wandering in a streetful of shops, I forgot what I was supposed to be shopping for!

Only the cursor keys or joystick are needed to play the game, other than the spacebar to clear the title page. Instructions appear on screen to remind you of this if you don't do anything after a time.

Children from about age three up will be able to play, since they are not asked to type letters or words, but they will need someone to read the item required and the shop's signboards – though after a while the graphics will be enough to identify the butcher from the baker. The youngest children will learn which shops are likely to sell the item they want.

The pictures of some items within the shops are rather crude. I thought I was buying a 'juicy apple' according to my shopping list. 'Bad luck,' said the screen, 'you have just bought a red capsicum'. (How many adults, let alone children, would call a red pepper that? There are a few other obscure items, such as a Battenburg cake.)

Guide Sam to the right item and the screen says, 'Well done, all correct!' Then comes a bigger challenge: a shopping list with *two* items. They must be bought in the order given. I could never remember the rest of the list after finding my way to the first – typical, says my wife. I never made it to level 3.



Computer Snap was my favourite on the *Trio* package. The colourful graphics – Humpty Dumpty, witch on a broom, lightning flashing – were charming.

There is no reading or writing involved in the game, and only one key to press when pictures match, as in the popular card game. So even two-year-olds can play, without needing even the dexterity to manipulate cards.

One player can compete against the computer or against a second player.



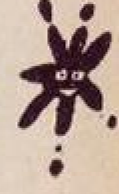


Tables Test, the second program on *Trio*, is self-explanatory reinforcement stuff that a youngster could carry on using occasionally up to age 10 or 12.

The child selects the 9× table, for example, using the cursor keys and then chooses speed: snail, hare, car, airplane or lightning (I liked the pictures). An insistent alarm-clock jumps up and down if the time runs out.

Type the correct answer (on numeric keypad or main keyboard) and a happy disco-kid presents an apple; otherwise it's a skull from a scary goblin.

One criticism is that correct answers are not given if a wrong answer is typed.



All three programs are written largely in Basic, which has both advantages and drawbacks. It should be possible to alter data lists to suit your household name for red peppers; on the other hand a child could press Escape and crash the program.

All three have music throughout, like a miniature fairground organ, with various other electronic sound-effects.

First Steps with the Mr Men

Mirrorsoft, £8.95 cass, CPC464

Richard Boulton's charming story booklet sets up four games with the Mr Men. Even a very young child can play, since no reading or writing is involved. It's good practice with the ideas of left and right, which even many adults find troublesome.

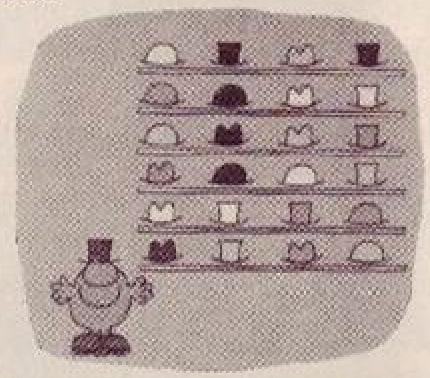
In the first, Mr Greedy has to be directed to a luscious ice-cream hiding in a corner of the room. Only the cursor keys are needed, and colour-coded stickers of Mr Clever pointing various ways are provided (though I don't know how long they would last – presumably you'd be taking them off to use the computer for other jobs). Mr Clever's colours match the colours of the walls on screen (not much help on a monochrome monitor, but not essential.)



Mr Greedy does not stop with one ice-cream, but they become harder to get: more and more walls appear in the room and he has to be navigated round them.

The booklet doesn't tell you to reset the computer (Control-Shift-Escape all together) before you can load the following program without a 'memory full' error.

Mr Silly is being sensible in the second program and has gone shopping for a hat. He says (pictorially) the style and colour he wants to try on. Cursor keys move a marker along the shelves and the Copy key – with a Mr Clever sticker – selects. What silly thing does he do when he tries on the next hat?



The third program was my favourite – I especially identified with Mr Forgetful who tidies things up into good places and then can't remember where.

Mr F has installed a dozen wardrobes in his room: six along one wall, six facing. He puts a left shoe in a left-hand wardrobe and the right shoe in a wardrobe on the other side. How organized! He does the same with socks, boots, mittens, skates and slippers. But oh, no, what is where?

He must go back and forth across the room (by means of the cursor keys), looking inside wardrobes. The trouble is that they stay open only if he finds two things to match. He somehow has to remember where he saw the first sock when he finds a second.

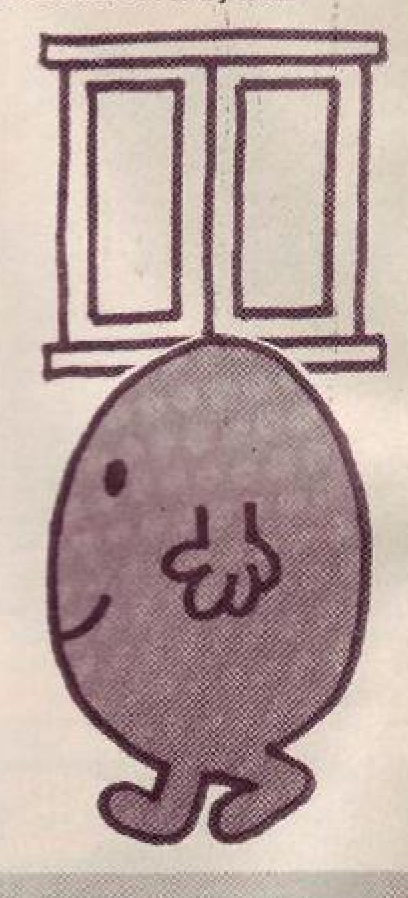
Everything has muddled itself into new wardrobes if you play the game again.

A variation on the game puts alphabet letters instead of clothing in the wardrobes. An adult can specify a subset of letters and make it fun for a child to learn a few at a time.

In all these Mr Men games, various keys allow restarting the game, turning sound on and off (the tunes are hardly symphonic) or changing the background colour.

A nuisance in the packaging is that the booklet does not fit inside with the cassette. It has to be removed from the outer plastic sleeve – rather awkward. Loading and playing instructions seem to be missing until you think of removing the outer jacket and reading the back of it.

The cassette is labelled 'CPC464' although the outer package says 'For use on Amstrad' without specifying. It would not load it on our 6128; we did not have a tape-decked 664 to try it on.



Here & There with the Mr Men

Mirrorsoft, £7.95 cass, CPC464, joystick or keys

This time Mr Tickle and Mr Grumpy practice left and right – thinking ahead for simple route planning is the theme.

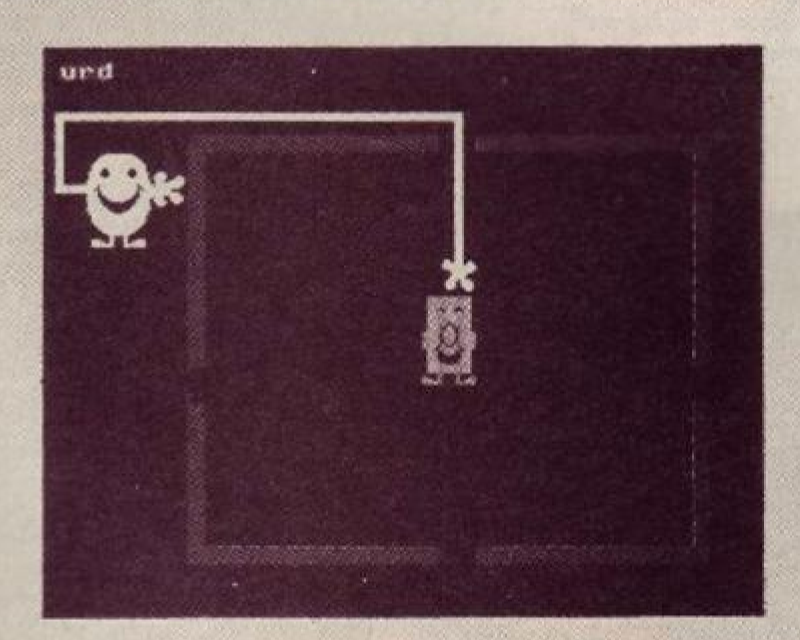
The object of the first game, *Mr Tickle's Jigsaw Puzzle*, is to line up doorways and move pieces to build up a complete picture of Mr Tickle.

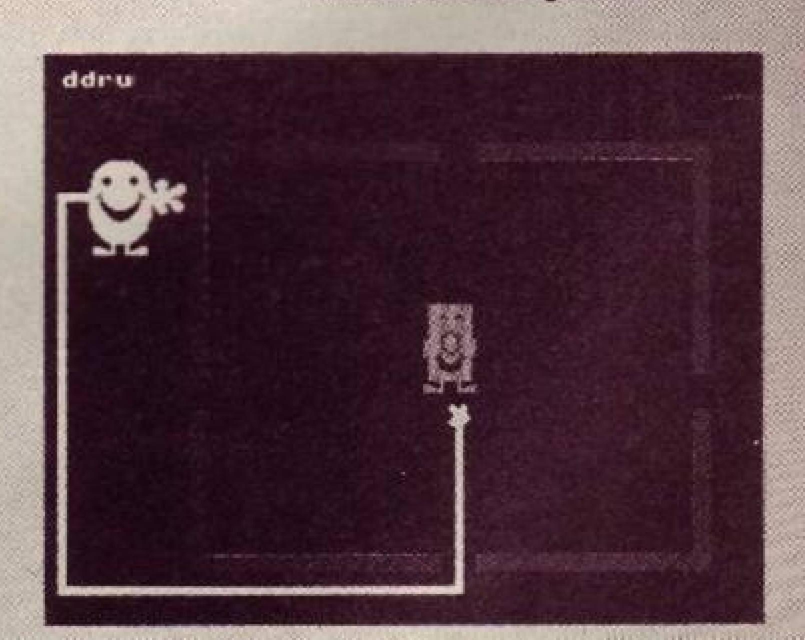
In the second game, Mr Tickle tries to cheer up Mr Grumpy, who doesn't want to be cheered up. Mr T's arm can stretch longer and longer to reach through doorways to where Mr G is hiding. Sometimes he tries to block up the doorways with chairs. Mr Tickle's arm can be made to bounce off walls, chairs, Mr G or even itself.

Instructions can be given a step at a time, using the cursor and Return keys, or planned out a whole list at a time.

Mr Lazy, in the third game, is snoozing under an apple tree. He tries to instruct a friendly worm to crawl along the correct branches and drop a juicy apple for him to eat.

A gang of four Mr Men in the last game tries to stop Mr Tickle from moving in a checkerboard-like game. ■

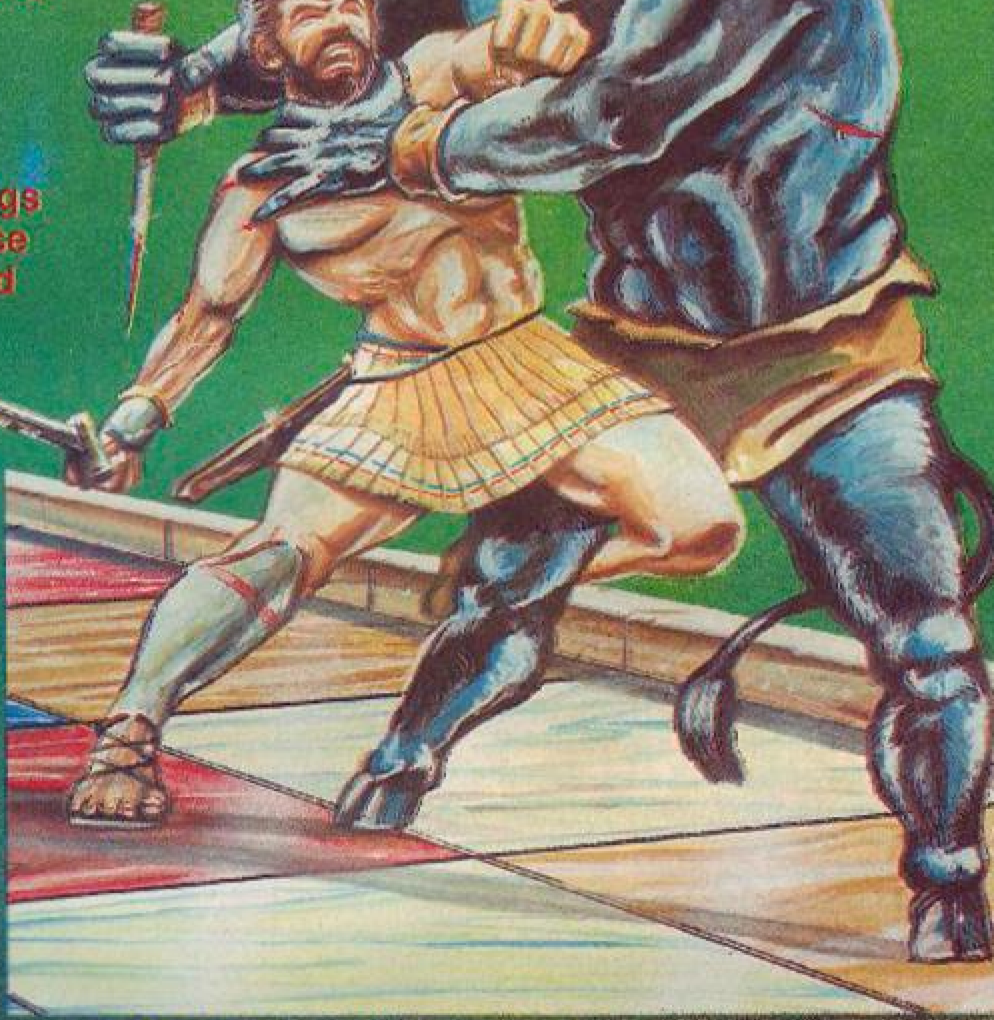




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BREAKPOINT

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This latest Melbourne House utility is a real oddity, and no two ways about it. It's a monitor – a tool for debugging machine code programs – and there's nothing unusual about that. The point is, however, that it's just a monitor: nothing more.

If you want to program in machine code, you really need an assembler. This enables you to write your program in easy-to-learn *assembly language* rather than the completely unmemorable hexadecimal numbers that make up machine code itself. There are many assemblers available for the Arnold, and they're mostly around the £15 mark in their cassette versions.

Once you've got the hang of programming in assembly language and started writing lengthy, complex programs, you'll start to find some unpleasant bugs cropping up. Unlike Basic, you'll have no error messages to help you and the escape key is unlikely to stop your program. Worse still, bug-ridden machine code programs tend to go beserk, often destroying all evidence of what the problem actually was in the first place.

It's this kind of problem that monitors are intended to help you solve. They're so called because they let you 'monitor' the running of your program and (hopefully) stop it just as things start to go wrong. That way you can see what you've done wrong, kick yourself for your own stupidity and then put your program right. Sounds useful, does it? Sounds like every Arnold-owning machine code programmer is going to rush out and buy *Breakpoint*? Well actually, they aren't.

If you've got an assembler you're not going to bother buying a monitor, for the simple reason that you've already got one. As a general rule, assemblers and monitors are sold together as an 'assembly language programming system' or similar. I'll stick my neck out here and say that I can't think of one assembler commercially available for the Arnold that doesn't come with some sort of monitor.

A monitor is considerably less useful than an assembler, and of very little use on its own. Clearly *Breakpoint* would need to be quite remarkable to sell under these circumstances. Equally clearly, I'm afraid, it isn't.

In use it's a fairly ordinary single-step/breakpoint monitor. You can run your program one instruction at a time, you can run it slowly while keeping an eye on it, or you can set it off at full speed with a breakpoint to stop it at some crucial moment. *Breakpoint* can also show you areas of memory and allow you to make small modifications to it. You can search memory for particular numbers, you can save chunks of code to tape or disk. All functions are controlled by two-letter commands, entered at the command line.

All very well, and what it does it does proficently, but that is what you would expect from any such package, and with most you would get an assembler as well. Considering that *Laser Genius*, reviewed in our July issue, offers a better monitor and an assembler for the same price, *Breakpoint* cannot be said to offer value for money. The sample reviewed was pre-production, though the manual was very reasonable, but unless Melbourne House add an assembler on production versions we cannot recommend it. ■

GOOD NEWS	BAD NEWS
▶ It works, and is both competent and thorough.	▶ Buy *Laser Genius* and you get a better monitor and an assembler thrown in for the same price. ▶ Not relocatable in memory.

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ART STUDIO

THE OCP ART STUDIO

Rainbird (01-240 8838), CPC 6128 disk only, £19.95

If you want to buy an art package for your Arnold, you'll find you're spoilt for choice. Under the circumstances any new system needs to be something really special if it's going to survive. Rainbird has just released *Art Studio* for the 6128 and special is certainly the word for it.

Two things struck me immediately about the package: first that it works only in Arnold's two- or four-colour modes (modes 1 and 2) rather than the more normal multi-colour mode 0, and second that it is strongly inspired by the Apple Macintosh and similar WIMP (Window, Icon, Mouse, Pull-down menu) systems.

How you feel about the first of these is very much a matter of taste – I can't say I miss mode 0 myself, but it does seem an odd omission. As for *Art Studio* being WIMP-inspired, that's pretty common these days. The difference here is that where most packages aim to look like the Macintosh, *Art Studio* sets out to perform like it – and to a considerable extent it succeeds.

PROTECTION

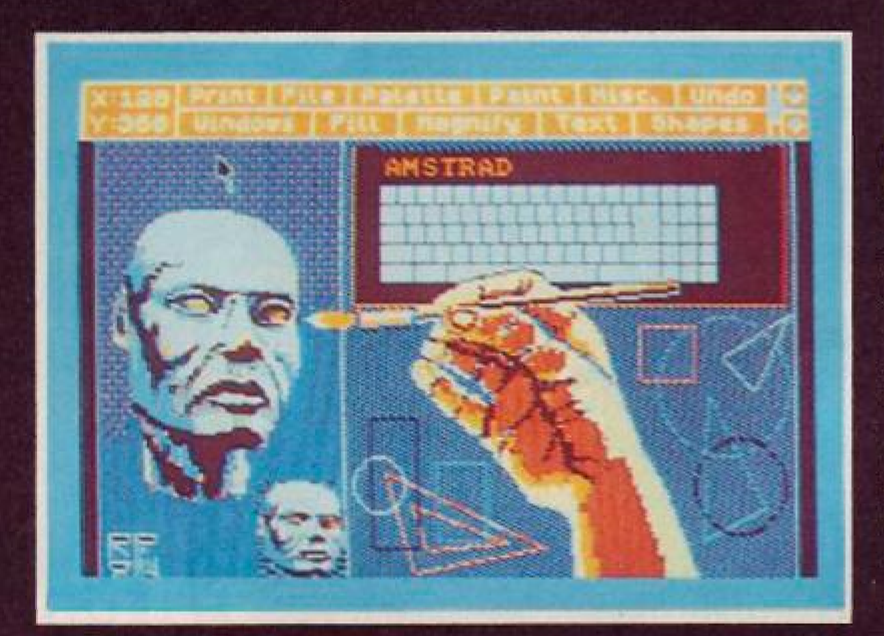
The first thing you'll notice about the system is the Lenslok protection it uses. I've had my rant in the past about honest users being saddled with cumbersome protection systems, and I'd certainly call Lenslok cumbersome – but in this case there is a reason for it.

Rainbird doesn't try to stop you from making copies of *Art Studio*; in fact, the publisher helps you. There's a feature which allows you to save a 'customised' version of the program to disk, so normal copy-protection is clearly not going to work. Given that the program is easily usable without the manual, Lenslok is the only alternative to actually trusting people.

SELECTING PULL-DOWNS

Once you've got past the protection system to the program itself, you're presented with the usual blank screen. There's a series of options runs across the top of the screen, and a small 'arrow' pointer. You can move the pointer around using cursor keys, joystick, or even a mouse if you're lucky enough to have one.

To select one of the options just move the pointer to it and press 'select'. (That's the space bar on the keyboard or the fire button on the joystick.) Selecting an option produces a *pull-down menu* – a list of further options which overlays part of the screen like a roller windowblind. Choosing one of the options on a pull-down works the same way: move the pointer to it, press 'select' and there you are.



PAINTING AND SHAPES

The first options you're likely to be interested in are *Paint* and *Shapes*. Between them these offer you all the main features you'll need to create your pictures.

The *Paint* pull-down provides the three main tools – pen, brush and spraycan – in a variety of different shapes and sizes. On selecting pen, for example, you'll get another pull-down panel demonstrating the sixteen different shapes of pen available. Just move the pointer to the appropriate shape, press 'select' and you're in pen mode. Move the pointer onto the drawing area and it turns from a little arrow to a little pencil. Hold 'select' down, move this pencil pointer and you'll draw a line.

The brush and spraycan options work in the same way, but with brush- and spraycan-shaped pointers instead of the little pencil shape. These different-shaped pointers are meant to remind you which drawing or painting mode you're in, and like pull-downs they make the program very easy to learn without the use of the manual.

Although the available ranges of pen shapes and spray patterns are both fixed, you can alter the selection of brushes to suit your needs using the *edit brush* option on the *Paint* pull-down. Choosing this option gives you a brush-editing menu where you can alter the pattern of dots that forms each brush. This comes in two stages, the *data* and the *mask*. Put simply, the mask defines how much of the background the brush wipes out and the data defines how much new colour the brush applies.

The *Shapes* pull-down allows you to 'rubber-band' straight lines, triangles and rectangles. You can also draw circles and plot individual points.



FILL AND UNDO

Once you've created a drawing with *Paint* and *Shape* you can flesh it out a bit with the different options from the *Fill* pull-down. There are two main types of fill available: *solid* and *over*. Solid fill works on an area of one colour and stops at the edges of that area. With overfill you outline an area with (say) blue and any colour inside is changed to blue. For most purposes you'll want to use a solid fill.

As well as filling with flat colour, you can solid-fill an area with one of 32 different textures. The predefined textures include grids, fine checks and wavy-lines, but if you can't find the one you want you can define one of your own using *edit texture*.

Over is the riskier proposition, but either kind of fill can 'escape' through the tiniest of gaps. Fortunately there is a way

of reversing a fill or any other kind of drawing operation that goes wrong. Of the various options across the top of the screen only one works immediately rather than offering you a pull-down of further choices. That option is *Undo*.

The extra memory on the 6128 allows for certain luxuries, and *Undo* is one of them. Instead of keeping just one copy of your picture in memory the way most art programs do – the copy you're working on, that is – *Art Studio* keeps a spare one as well. Every time you switch drawing mode or perform some similar operation, *Art Studio* brings the spare copy up to date.

This means that when you're halfway through performing a series of fills or whatever, *Art Studio* still knows what your picture looked like before you started filling. When you select *Undo*, the program restores your working copy to the same state as the spare.

This spare copy of your picture isn't used just for *Undo*. It also makes possible the *wash texture* option on the *Fill* pull-down. This remarkable feature takes all the changes you've just made to the picture – all the things that *Undo* would undo – and fills them with texture. This effectively allows you to paint, spray and draw with textures rather than solid colours. While you can't actually see the effect until you've selected *wash texture*, it remains a very powerful technique.



That full-screen magnification window comes in very handy

MAGNIFY

Another benefit of the 6128's extra memory is the *Magnify* option. Rather than the small magnification window offered by most packages, *Art Studio* gives you a full-screen image. You can enlarge a given area of the screen by 2, 4 or 8 times.

Simply select the appropriate enlargement factor from the *Magnify* pull-down, move the cursor (now shaped like a magnifying glass) to the area of your drawing which you want enlarged and press 'select'. The screen now fills with an enormous blown-up section of your picture.

Though there's no normal-size image of the magnified area you're working on, you're unlikely to find this a problem. The large window means that on ×2 magnification you can see almost a full quarter of your picture – easily enough to see what you're doing to the picture as a whole. You can switch between the different enlargements without returning to the main menu. On ×8 there's an optional grid to make it clearer where one pixel – one individual dot of colour – ends and the next one begins.

You're free to pan the *Magnify* window across the picture by pointing at and selecting the Macintosh-style 'scroll-bars' along the top and left edges of the window itself. You can make fine adjustments to the picture using any of the available colours, and undo them again if they don't look right. Every possible consideration is given to the keyboard-only user, with sensibly chosen keys to switch colours and pan the window.

TEXT

If there's a central theme to *Art Studio* it's thoroughness. Text entry, an afterthought in most packages, is given the fullest treatment you could ask for. You can use text in any of three widths and heights, combining them freely to get a wide range



'Script' is just one of the fonts supplied with the package

of shapes.

Your text can run left to right or top to bottom, and the letters can be upright or sideways. There are also bold and italic options which can produce very useful if rather crude results. If you want to do anything more complex with text, the *font editor* option takes you into a whole new league.

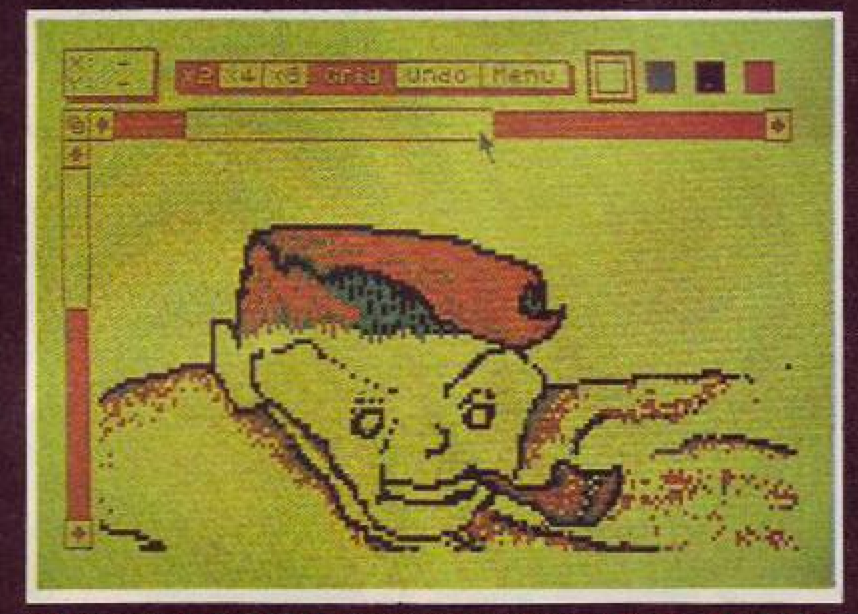
When you select *font editor* you're presented with a whole fresh screen dedicated to lettering styles. The full character set of the current font is displayed on the bottom half of the screen, while at the top there's a detailed view of the character currently being edited. You can scan through the character set, scroll an individual character or the whole font in any direction, make minute alterations to the current character or clear it and start from scratch.

Several fonts are supplied on the *Art Studio* disk, and you can save modified versions of these or your own original fonts for later use. If you wanted to create foreign alphabets or scientific symbols for diagrams, you should find this very simple. Of course most people aren't going to bother with all this, but most packages wouldn't give you the option in the first place.

WINDOWS

Once you've created your picture you might well want to make large-scale alterations to it. The *Windows* pull-down offers a strong set of special effects based on the idea of a 'window' – a rectangular area of the screen defined by stretching a 'rubber box' round it.

Windows can be copied, moved or cleared. They can be rotated through 90, 180 or 270 degrees, mirrored horizontally or vertically, and stretched or squashed in either direction. You can use a window like a paint-brush with the 'smear' option, or merge it with the previous contents of the area you're copying it to. There's also an option to 'exclude' one colour, typically the



Windowing allows you to copy, reshape and rotate blocks of your picture

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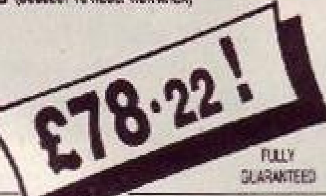
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Windowing needn't involve moving an area of the screen around. The *swap inks* and *change ink* options allow you to alter the colours of a windowed area, and are particularly powerful for creating special effects.

Everything possible is done to reduce the effort needed in defining windows. You can define the whole screen as a window simply by selecting *whole screen* from the pull-down, or redefine the previous window using *last window*. If you want to make several copies of the same thing you can set the copying mode to 'multiple'. This means that *Art Studio* automatically redefines the last window after each operation on it, cutting in half the amount of selection you have to do.

FINISHING TOUCHES

The file-handling and printer-dump options show the thoroughness and ease of use characteristic of the program as a whole. The printer option is particularly well thought out, with just about every feature you could ask for to cope with the quirks of different printers.

The manual is excellent, though you probably won't find you need to refer to it all that often. For most people its chief function will be to point out all the many excellent features which you could otherwise easily miss. The program is so natural and self-explanatory that you can work out most of the main features just by sitting down and using it.



VERDICT

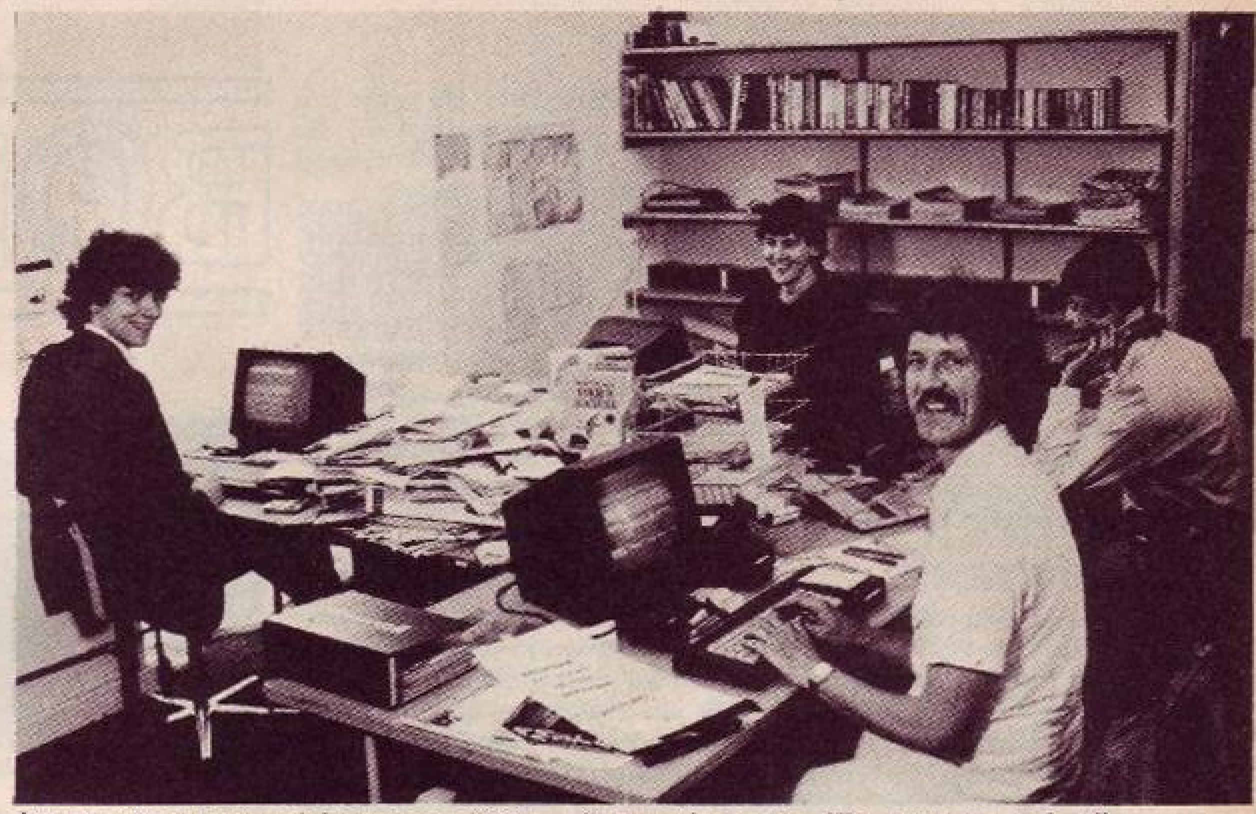
Of all the many art packages available for the Arnold, this has to be the best. The only real shortcomings are the lack of a mode-0 facility and the need for a 128K system; Lenslok is an additional annoyance. These are far outweighed in my book by the enormous power, ease of use and attention to detail which are visible in every aspect of the system.

While *Art Studio* is easy to operate from the keyboard – you can even define your own keys if you like – or a joystick, plugging in an AMX or Kempston Mouse turns it into an absolute joy. An awful lot of packages use icons and pull-downs just to be fashionable but *Art Studio* makes them earn their keep.

If you're after an art package that feels natural, gives good results quickly and that you won't outgrow, *Art Studio* must be the one.

GOOD NEWS	BAD NEWS
► A joy to use. ► Extremely powerful. ► Handles well with keys, joystick or mouse. ► Very thorough and detailed, with a first-rate manual. ► *Undo* makes for experimentation without tears. ► Can save 'customised' versions of system to disk. ► Terrific value – all this for £5 less than disk version of *Melbourne Draw*	► No mode 0, so you can only use four colours at once. ► 664 owners will need 64K of add-on RAM, and 464 owners will need a disk-drive too. ► Lenslok can be annoying.

A day in the life: How Arnolds do *AA*



You might think the Ancient Capital of Wessex an odd place to produce and publish one of Earth's leading Amstrad hi-tech magazines (namely the one in your hands).

However, we do have electricity at the Old Barn. Arnold is quite happy wherever plugged in – even if some members of the staff miss the bright lights.

We compose our peerless prose on the green screens of three red-hot CPC keyboards – rather awkward since there are now four full-time on the *Amstrad Action* editorial team. Bob Wade pecks away on his 664 while Andy Wilton stares at the screen of his 6128. Jim Nagel and Matt Nicholson (when he's not wearing his *PC Plus* hat) fight over the other 6128, which sports a second disk drive and a modem. This machine is usually used to sub-edit copy written on the others.

On the next desk sits a permanently switched-on 464 with the only colour monitor in the building. It has both cassette and disk, as well as a Maestro stereo attachment and one of our special-offer Konix joysticks (advt). Some game or other is always running, whether for review or recreation.

AA started life 14 issues ago with just the 464 and the 664. Can you imagine the state of Bob's eyes at deadline, after days and nights of word-processing on the 464's low-resolution colour screen? Matt can; he's writing this issue's Line-up on it now, having lost to Jim who's scribbling this on the newer 6128.

> **If you are using your CPC to control your train set, run your business, play in a rock'n'roll band or anything else you might like to tell us about, the address is A Day in the Life, *Amstrad Action*, The Old Barn, Somerton, Somerton, Somerset, TA11 5AH.**
>
> **That's an invitation to you to chronicle your experiences with Arnold. To start it off, we put our own chips on the table this month: *Amstrad Action* is done about, by, for and on Amstrad CPCs.**

Future Publishing bought three of these when they first came out in September 1985, just after issue 1 went to press: a decent keyboard and disk at a price a young company could afford. The third one is cornered by Jane Farmer and Di Taverner for correspondence and invoicing – and for subscription files, which now push *Tasword* about to its limits. The subs job will likely go to the more-powerful PC when we eventually get one.

Tasword gave way to *WordStar* as the work-horse word-processor in the editorial department as soon as it became available on 3-inch Amstrad disks. *Tasword* caused typesetting nightmares: it insisted on popping 'hard' carriage-returns into the text file at the end of every line on screen. But lines when typeset do not break at the same point as on screen: 'MAW' is fatter than 'fit'.

We prefer *Newword*, but it needs twin disks and CP/M Plus (we still have only version 2.2 on most of our machines), so only this one machine can handle it. It's a *WordStar* workalike with the advantage of highlighting bold and italic on screen. Jim, growing a beard waiting for *either* of them to load themselves or load a file or search-and replace or reformat paragraphs, is not allowed to yearn yet again for the lightning speed of *Wordwise Plus* on that Beeb he hides at home.

In all this time we have never managed to configure the keyboards all the same way. Press Shift with ⇩ on one machine and the cursor goes to the bottom line of the screen; on somebody else's you land at the top. 'Some day, when I'm not so busy, I will try to find the manual.'

Terrific typography

Somerton may be in the sticks but it does help that we are only six miles from one of the most advanced typesetters in the world: Wordsmiths, a.k.a. Anvil Systems, at Street, Somerset, in the shadow of Glastonbury Tor.

This firm specialises in hammering text files from just about any micro's word-processor into typeset galleys – fast. There is no day's delay while someone re-types everything we've already written, no further day spent on proofreading and corrections. A 10-minute drive up the B3151, our disk goes into the Joyce at Wordsmiths, bits zip across a cable to the Xitan Magic Machine, get translated into typesetter language, down another cable to the Lasercomp, bromide paper develops and dries, a 10-minute sprint back to the Old Barn: within an hour of writing it's ready for the art team upstairs.

We don't have to type beastly typesetter code into our copy – the simple instruction * F2 at the top of this article tells the system all it needs to know about font, size, linespacing, column width, style for headings and so on. We turn on and off ↑*Sitalics*↑S and ↑**Bbold**↑B with the same word-processor commands that produce these effects on a dot-matrix printer. Complex effects like our 'good news, bad news' can be called up just by typing '= = good'.

Wordsmiths' service is good news.

Confounded comms

I mentioned a modem hanging off the sub-editor's 6128.

There was a time, before my time, when *AA* tried transmitting text to Wordsmiths down the telephone line. The reason was not to save time – they can't very well modem the finished bromide back to us, so we still have to make a round trip. No, in the pre-Joyce days their machines did not fit our disks, so the only link was serial ports.

Fine in theory, but Amstrad's port gave only 7 bits whereas the 8th is needed to distinguish 'soft' carriage-returns (which we don't want typeset) from 'hard' (which we do – to end paragraphs).

We were stuck with a cheap (and non-approved) modem offering only 300 baud. An article could take 25 minutes to transmit.

Worse, there was only one telephone line, since the first issues were produced from Chris Anderson's house. Thus there was no way of verbally confirming that text was being received at the other end. Many a wasted 25 minutes!

Nowadays we have five phone lines and a good modem – a Nightingale connected via Pace's serial interface. *Commstar* software is instantly available, since it's on ROM.

Its main use is receiving copy from some of our free-lance writers. It's still a frustrating exercise trying to get one micro to talk to another. So it seems simpler to send text first to a Telecom Gold electronic mailbox and then retrieve it.

Guess what? Gold stuffs it full of hard carriage-returns. Last week we put *WordStar* to work on a search-and-replace and went to lunch. It was still working an hour and a half later.

The modem business is another case of 'one day, when I have time,' sorting out the configuration once and for all. It would be useful to know an Amstrad technical boffin at Micronet headquarters.■

ANATOMY OF THE CPCs

First Publishing (07357 5244), hardback £14.95, 403pp

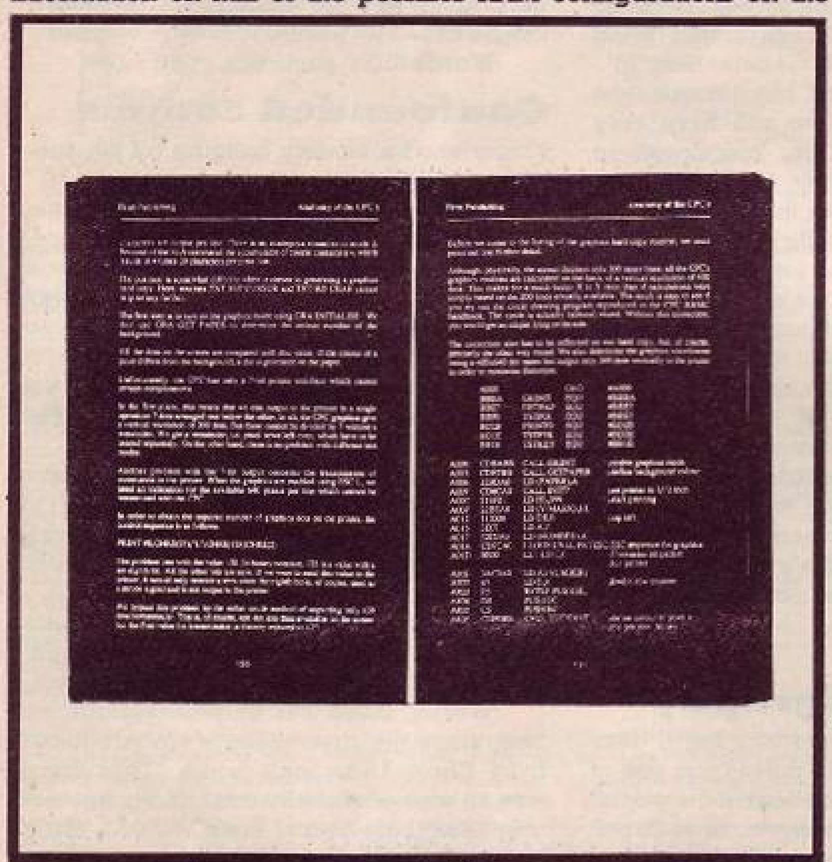
BOFFIN B

Like many of First's books these days, this one hails from German computer-book publishers Data Becker. Unfortunately it has lost a certain something on the way from Düsseldorf to Pangbourne. At one point for example, it assures us that 'The SCREEN PACK is slaved to the TEXT and GRAPHICS PACKS. It practically serves as their executive.' Later on in the same section it refers to the action of control code 07 as 'Klingel' rather than the 'Bell' you might have expected. Minor niggles perhaps, but clarity's important in technical books. There's no sense putting extra obstacles in the way of understanding, when most authors can create plenty of their own.

CONTENT

The book breaks down into three main sections: hardware, operating system and Basic. The hardware section is not particularly noteworthy, taking for the most part a chip-by-chip analysis of the CPC's innards. While this can be quite interesting, it contains very little that Amstrad's firmware guide doesn't handle better. A fair amount of effort is wasted describing features that Arnold's design prevents the user from getting at. Do you really need a book about what Arnold might have been?

To make things worse, there are quite a few omissions and inaccuracies. The authors claim that they could only find information on half of the possible RAM configurations on the



6128, even though the missing configurations are at least partially documented and can in any case be worked out with a little effort. Why they didn't make that effort I'm not sure, but galling to pay £15 for a book and then have to work it out yourself.

They also misunderstand the conditions under which key-clashes occur, and state boldly that such clashes have no adverse effects. In fact key-clashes can cause serious problems in games and make twin joysticks almost useless. It is important that programs requiring key combinations are written with this in mind, and the key combinations chosen accordingly.

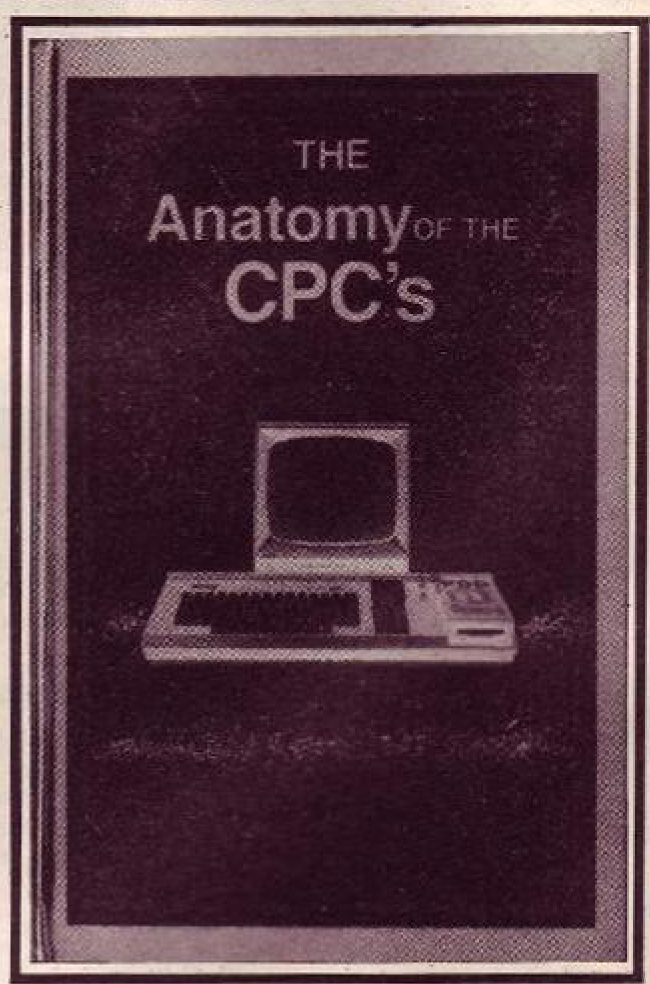
INTO THE ROMS

The sections on the operating system and Basic are where the book starts to earn its price. These are built round near-disassemblies of the lower and upper ROMs respectively. I say 'near-disassemblies' because there are no details of the actual source code itself. Rather there are extensive notes on the precise function and structure of ROM routines.

The idea is that you print out your own disassembly of each ROM, and then use the book as a set of notes explaining each section. If you don't have a disassembler, fear not: there's one in the appendix for you to type in. If you don't have a printer, on the other hand, you're probably wondering why the book doesn't contain a source-code listing as well as the admittedly comprehensive notes.

I'm not entirely convinced that lack of space is the reason: most of the time the notes occupy only the left side of each page, and frequently the hex or source code would explain itself perfectly well anyhow. I don't know whether legal worries intervened, but the ROMs are copyright and this may have something to do with it. Or maybe Schneider owners all have printers.

One thing even printer owners should ask themselves about is the actual usefulness of these listings. For starters, they only cover the 6128 ROMs. While the authors are at pains to point out the similarities between the different CPCs, this is



bound to cut down the book's appeal to 664 and more particularly 464 owners.

More importantly, rummaging around in Arnold's ROMs has little or no practical value. Routines in the lower ROM can and should be called via the firmware jumpblock, as the authors themselves state at one point. Calling ROM routines directly makes for compatibility problems, and prevents interception of operating system calls.

VERDICT

Don't get me wrong – the Basic ROM in particular is a pretty interesting thing to take a wander around, but I don't really think the book's curiosity value quite merits the £14.95 asking price. You're going to need the Firmware Guide if you want to use the operating-system routines, and the extra information in this book really isn't worth the money.

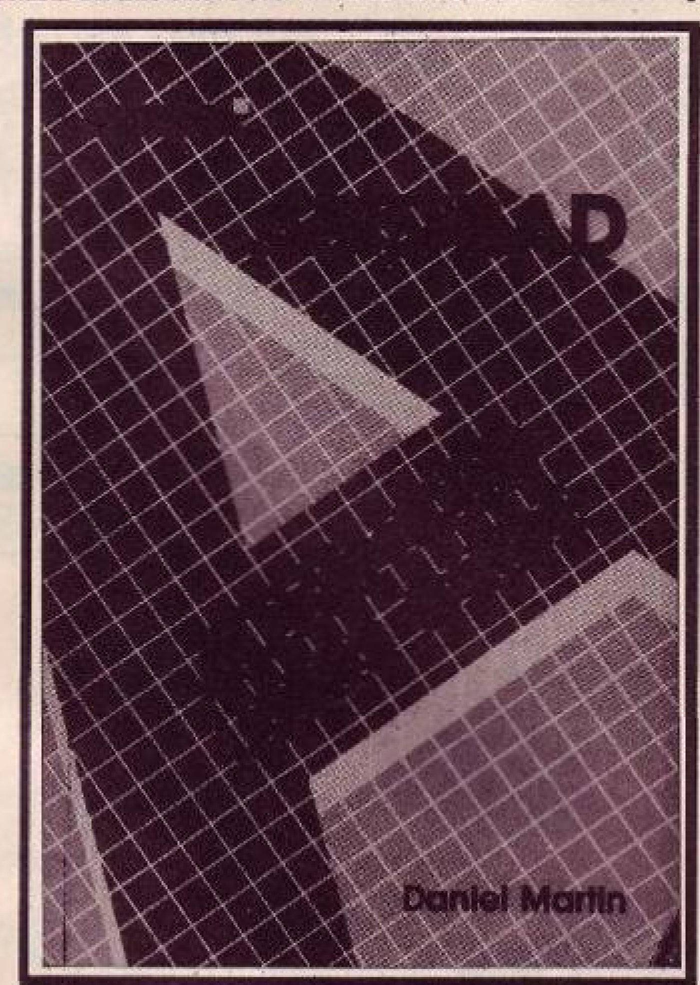
OOK BLAST



AMSTRAD ADVANCED USERS GUIDE

by Daniel Martin
Glentop Publishers (01-440 4130), paperback £8.50, 160pp

Once again we have a technical volume which hails from abroad – France in this case – but there's a marked difference of emphasis on this one. I can't find fault with the translation quality here, but then the book is largely a collection of tables and diagrams anyway. There's very little straight text to it, and no form of commentary to take you from one piece of data to the next.



The first problem with the book is its scope: it's a jack of all trades and master of none. After two pages on the CPC's internal architecture, the author launches into a chapter on Basic. If you own a 464 you'll have most of this – a keyword summary, character-set breakdown, Ascii table etc – in your manual.

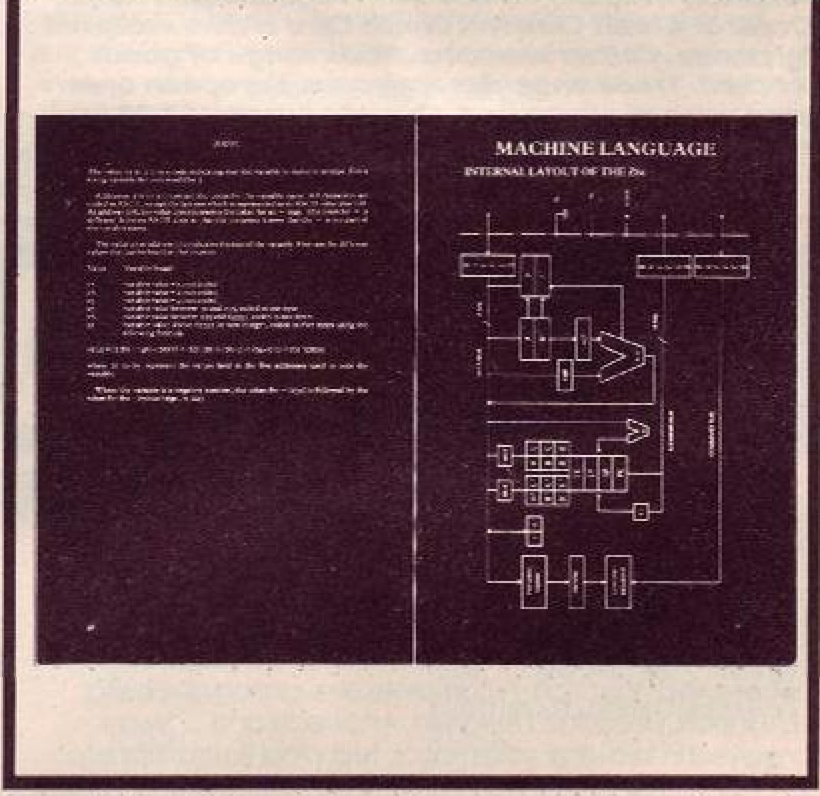
If you're a 664 or 6128 owner, on the other hand, you could reasonably wonder where FILL, COPYCHR$ and similar Basic 1.1 keywords have got to. The chapter and indeed the whole book are, it turns out, 464-specific with extra 664/6128 information relegated to the appendices. It's a bit of a shame then that the author fails to point this out either in the keywords section, any other place where the CPCs differ or indeed anywhere at all. It's even more of a shame that Glentop didn't collate the book in the obvious way.

It doesn't really matter, because there's no startling new keyword information here. Where the CPC manuals are desperately short on explanations, so is this book. You want to know how CALL parameters are passed to machine-code subroutines? That's just too bad, because the book doesn't tell you.

Moving on to the book's meatier chapters we get a whirlwind tour of Z80 code and the operating system. The section on machine code is a brief set of notes and a whole load of tables. The flags table is quite handy and the disassembly charts are very well presented, but serious programmers will want timing details and these are sadly missing. Overall it could be handy for reference if you're well up on Z80, but it certainly won't teach you anything if you aren't.

The operating-system details are probably what most people will buy the book for, and they are detailed enough to be usable – but only just. Entry and exit conditions are given along with some indication of each routine's function. This will be more than sufficient for TXT OUTPUT, but most people will need a lot more before they can use something like KL INIT EVENT. Once again, if you know it already the book could be a useful reference work. Otherwise you can forget it.

The rest of the book is in much the same vein, consisting in roughly equal parts of stuff that you already had in your manual and stuff that you didn't want to know in the first place. If you want all the tables and charts from your user manual together with a handy (but rather lightweight) precis of the Firmware Guide then this book could be for you, but don't expect it to replace either of them. Personally I would only use it for quick reference, and it's only just thorough enough for that.



GOOD NEWS
- ► Cheap source of information on the firmware.
- ► Could come in handy as a reference work.

BAD NEWS
- ► Information is presented in very raw form, with no commentary to explain or guide you.
- ► Wasted pages and pages duplicating sections of the user manual.
- ► Firmware information isn't thorough enough.
- ► Info specific to the 664 or 6128 is hidden in the appendices or just plain missing.
- ► £8.50 for 160 pages isn't terrific value.



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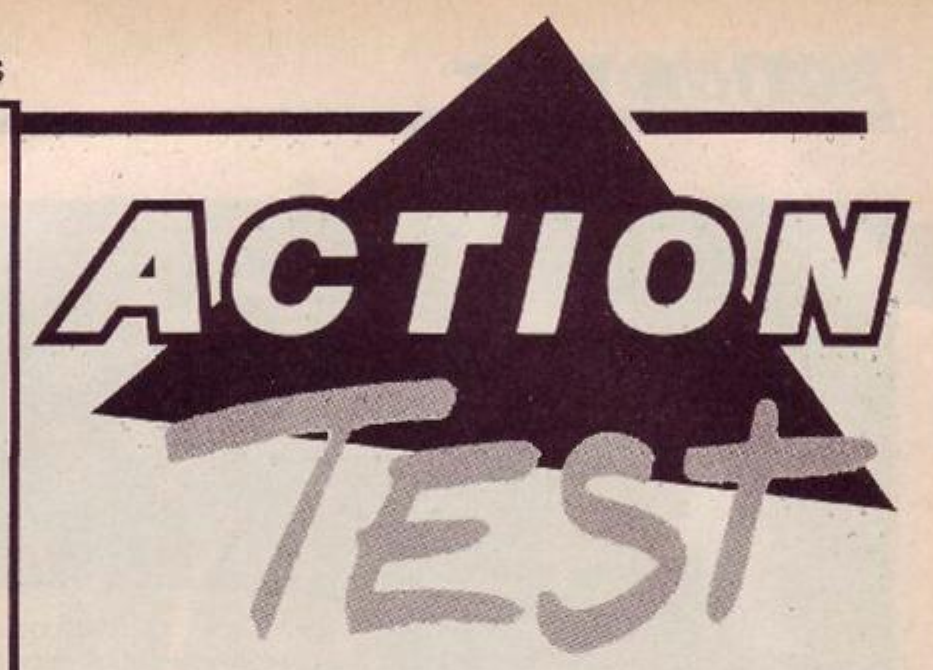
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Third Opinions:
To prevent needless repetition, and to give the old Ed a rest once in a while, we have only put Third Opinions on the *AA*-Raves and Mastergame. Whether a game gets these titles or not is generally a group decision, though usually Bob's vote prevails!



VORTEX ON TOP

Distributed by US Gold, Vortex's *Revolution* earns the coveted *Amstrad Action* Mastergame award this month with simple but gripping action. The graphics are superb, and controlling that bouncing ball takes some doing even for the hardened joystick waggler.
But *AA*-Raves are thin on the ground , with only three on offer this time round. *Deactivators* from Ariolasoft sees robots running around disposing bombs and trying to keep things together before the building blows, while Domark's *Split Personalities* is a clever variation of the old Puzzler game with a topical slant. *Tempest* from Electric Dreams is a fast moving version of the arcade classic.
The TV-based *Knight Rider* gets a firm thumbs down - stick to the TV version if you want some action - and *TheVera Cruz Affair* was disappointing. But what are you doing reading this? Turn the page and get into the real stuff!

TOP 20 AMSTRAD GAMES
The chart created by AA readers

This month	Last month	% of votes	Title	Software house
1.	1	10.2%	GET DEXTER	PSS
2.	2	8.4%	GREEN BERET	Imagine
3.	3	8.2%	BOMBJACK	Elite
4.	7	8.0%	BOUNDER	Gremlin
5	4	6.4%	BATMAN	Ocean
6.	12	6.3%	COMMANDO	Elite
7.	5	5.9%	SPINDIZZY	Electric Dreams
8.	11	5.9%	SORCERY PLUS	Virgin/Amsoft
9.	—	5.2%	KUNG FU MASTER	U S Gold
10.	19	5.0%	SPELLBOUND	Mastertronic
11.	—	4.9%	THRUST	Firebird
12.	—	4.6%	THING ON A SPRING	Gremlin
13.	14	4.0%	KANE	Mastertronic
14.	10	3.4%	GHOSTS 'N' GOBLINS	Elite
15.	—	3.4%	KNIGHT TYME	Mastertronic
16.	15	2.8%	HARVEY HEADBANGER	Firebird
17.	—	3.0%	3D STARSTRIKE II	Realtime
18.	9	2.8%	HIGHWAY ENCOUNTER	Vortex
19	—	2.3%	BATTLE OF BRITAIN	PSS
20.	—	2.1%	WHO DARES WINS II	Alligata

No change to the top three positions once again, although *Bounder* has bounded over *Batman* to take the fourth place.

Fresh to the charts come the excellent cheapie *Thrust*, which should work its way up the charts fairly soon, *Thing on a Spring*, the brilliant *Knight Tyme, 3D Starstrike II, Battle of Britain* and *Who Dares Wins II.*

If you think that *Get Dexter* is rubbish, or that *Space Invaders* is the best thing since *Pong*, then remember - these Charts are yours. Use the form on page 96 and you could change the world.

DEACTIVATORS

Reaktor/Ariolasoft, £8.95 cass, £14.95 disk, joystick or keys

This first game on Ariolasoft's new arcade-action label looks like being their best so far on the Amstrad.

It's set in a building where terrorists have planted bombs on five different floors of increasing size and complexity. You have to get rid of them before they explode. To do that you use a team of androids within the building who (which?) not only have to cope with the bombs but a host of other problems as well.

The screen is split into two sections, the top part showing two rooms in the game and the bottom part presenting various pieces of information. Each room is shown in 3D perspective from one side and will be connected to others by doorways, transporter pads or fireman-style poles. The section below usually shows a map of the building with your droids and the bombs marked.

An icon menu can be activated by the fire button to replace the map, providing four possible actions: change droid, throw object, look around, and return to current droid.

The five floors are of increasing size, complexity and number of bombs so the first floor may seem easy, but the fifth is a real monster.

On each floor is a computer which has several circuit-boards missing. They have to be found by the droids and inserted into the computer. Inserting a board will cause one of several things to happen, making getting rid of the bombs possible or easier. It may reveal a doorway, put on the lights in a pitch-black room, remove a forcefield blocking a route, enable a transporter or do nothing at all.

Each floor has a single exit. Once a route to it has been cleared you've got to start getting the bombs out before their time-fuses run out and they explode. To move both bombs and circuit-boards you've got to pass them between droids, throwing them through holes in the walls which the droids can't pass through. This can be hazardous though because too many impacts by the bombs and ... kaboom. If one bomb explodes you can't pass on to the next floor, but you can restart on the floor you've reached.

The use of perspective in the rooms is important; a three-dimensional environment has been created very well. The droids and other objects get larger as they come into the foreground. Positioning is important when catching objects. They move around their environment by falling through holes in the chequered floor, using transporter pads that connect remote sections of the building, and by sliding down poles (also, unlike firemen, up poles).

The bombs fuses are lit at intervals so you must throw them out in the right order, which can only be learnt by trial and error. If one explodes, the room can't be entered and anything inside it is annihilated.

Droids can also be lost if they run into robot guards who try to follow them, or forcefields placed on some doorways, poles and transporters. Bonus droids are given for getting enough points; these can be positioned during a game, a bit like bringing on a substitute.

The most interesting feature of the game is that rooms are sometimes turned through 90 or 180 degrees to be on their sides or upside-down. This creates some knotty control problems that can cause a vital split-second's confusion. Rooms also have different levels of gravity – important

SECOND OPINION

This one's got a marvellous combination of brain-taxing strategy and tough, nerve-racking action. The differing gravities, the dud circuit-boards and the enemy droids all pose challenging problems. But your real opponent is the clock. It's gripping, frustrating and very, very mean.

AW

NEXOR

Design Design, £8.95 cass, £14.95 disk, joystick or keys

Design Design is usually reknowned for its wacky and original games, but I suspect many fans will be disappointed by this one. It's an isometric 3D game, not a crime in itself, but one that borrows most of its features from *Batman* and doesn't provide as interesting a game.

The game is set in a military complex which has been overrun by alien robots. You have to escape with a top-secret master weapon and its blueprints.

The weapon is split into five pieces and there are two of each piece. You have to get together at least one complete device and try to stop the aliens getting the pieces of the other one. To escape the complex, which has been set to self-destruct, you also need a control panel for the matter-transfer beam and the blueprints of the weapon.

The rooms in the complex are connected by doorways, vertical shafts and lifts. Some open out so that you need to try walking off the front edges of them to see if there's a connecting room. They're not as well drawn or as colourful as *Batman*; the colour scheme is the same sort as *2112 AD*. Although many of the objects at first look unfamiliar, their uses and effect are quickly recognisable.

You can walk, jump and fall (miles at a time) around the complex, but your jumping action is slow and doesn't get you very far. You can pick up objects while standing on them and use them to get through doorways, to reach other inaccessible points or to avoid robots. As in *Batman* you can't take these objects out of a room. Collecting the pieces of the weapon is just like getting the bits of the Batmobile: they even come together on a separate screen in the same way.

The robot guardians appear in most rooms but this seems to depend on a time factor or your having visited certain locations. Some follow strict movement patterns while others are more random. There are also static hazards, but all are deadly to the touch. Nothing is new to what's gone before in *Batman* and the Ultimate games. Some of the hazards are well drawn including moving-head busts of Maggie '3 million' Thatcher, nasty spikes, bombs and a little fellow on a unicycle.

You'd think you couldn't go wrong by producing a game similar to *Batman*, but the bits that have been left out are what gave the original its greatness. There aren't enough complicated puzzles, you can't float or collect skills, and the graphics aren't nearly as detailed or colourful. It's not a bad arcade adventure with quite a lot to explore and find and many obstacles to overcome, but it does suffer from lack of originality by arriving in *Batman*'s wake.

BW

SECOND OPINION

If you're going to rip off features of a game then you might at least choose the best ones. Where are all the devious puzzles, the strange powers and the floating in the air? The Batman *theme definitely bears repeating but you need more variety than this – which is basically just a matter of wandering around mapping.*

AW

FIRST-DAY TARGET SCORE
3 pieces of weapon

One of the futuristic, isometric 3D rooms



 Well, punk, ...

when trying to throw things.

The graphics are the most disappointing part of the game because there's no attempt to use the Amstrad's excellent colour facilities. But the 3D is good, and the frenetic gameplay is excellent. You're constantly battling a tight time-limit and performing delicate manoeuvres where one slip and the game is blown.

BW

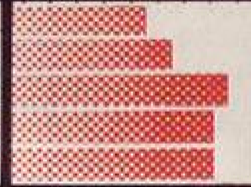
FIRST-DAY TARGET SCORE
20,000

GREEN SCREEN VIEW
No problems with playing in green.
AW

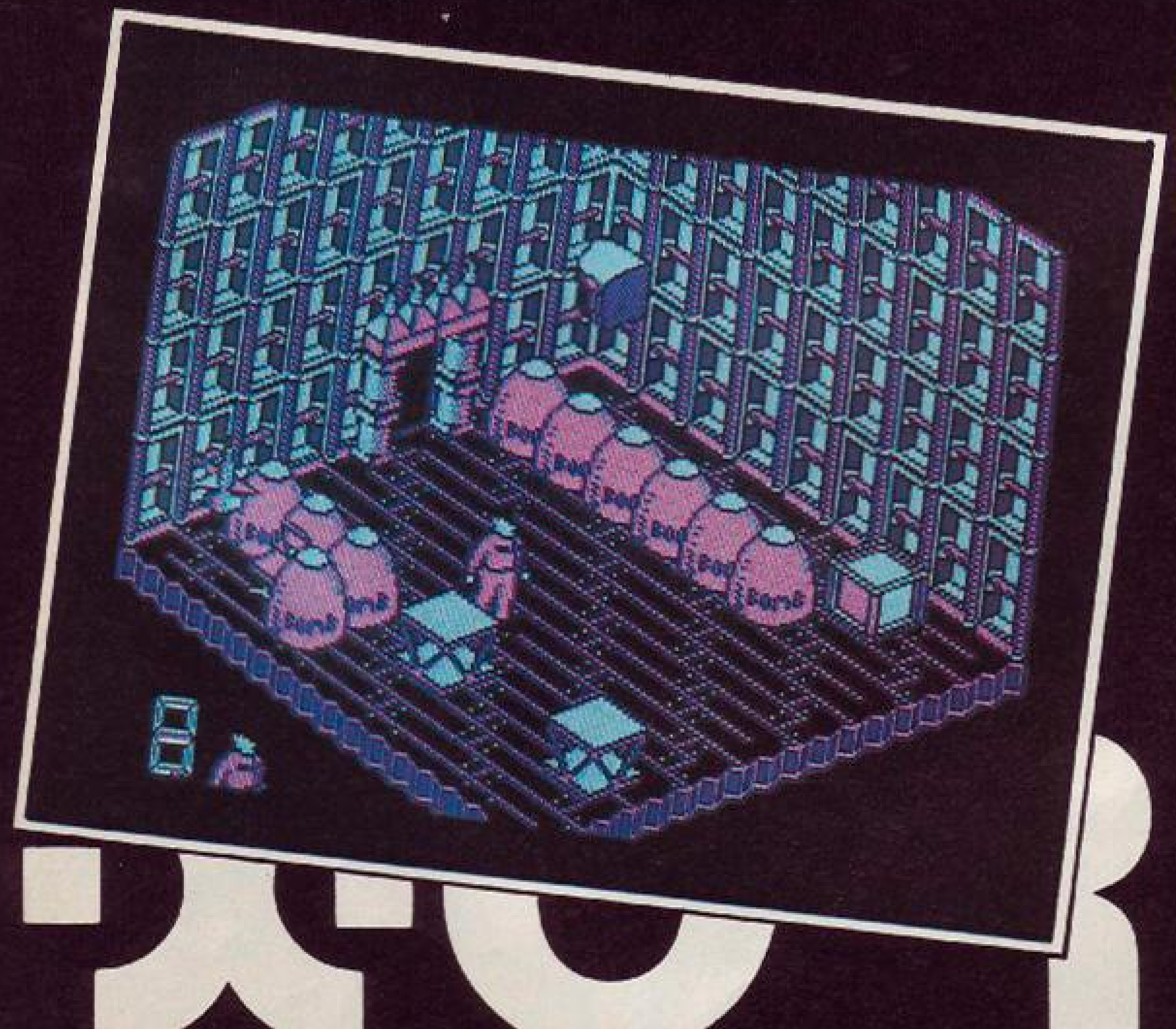
G O O D N E W S
- ► Five levels of increasing difficulty.
- ► A tough test of time and reactions.
- ► Well-designed buildings to make things complicated.
- ► Gameplay requires great concentration and quick thinking.
- ► Excellent features like twisted rooms, gravity changes and blacked-out rooms.

B A D N E W S
- ► Very bad use of colour.

AA RAVE


One of your faithful team of droids

GRAPHICS	57%
SONICS	67%
GRAB FACTOR	89%
STAYING POWER	87%
A A RATING	87%



GREEN SCREEN VIEW
The colour scheme works well in green. Only the odd object or robot is hard to see.
AW

G O O D N E W S
- ► Plenty of rooms to explore.
- ► Gradual appearance of robots is good.
- ► A tough task with many obstacles.
- ► Some good screens requiring object manipulation.

B A D N E W S
- ► Ripped off many ideas from *Batman*.
- ► Not enough puzzles or features to keep you busy thinking.

GRAPHICS	67%
SONICS	40%
GRAB FACTOR	68%
STAYING POWER	71%
A A RATING	68%

TEMPEST

Electric Dreams, £9.99 cass, £14.99 disk, joystick or keys

If you read our preview a few months back you'll know that this classic shoot-em-up is my personal favourite from the arcades. This certainly can't be described as a faithful conversion but it retains most of the elements of the original and the same mindless but incredibly addictive gameplay.

It's a completely abstract concept that takes you into the world of the wireways to face a deadly assortment of alien forces. These aren't the same as the arcade version and some have been renamed but there are also some nasty additions to keep you on your toes. The purist won't be entirely happy with the changes but there's still a fabulous game here.

The wireways are made up of 50 different types of grid and there are 99 skill levels, but once you're past level 10 things get very tough. Each grid has a number of lanes that taper away towards the centre of the screen, although the number of lanes, and therefore the ease with which they can be covered, varies with each grid. The grids either wrap around or have closed ends which you can't move off.

At the top of the grid is the spark which you control and this can move sideways across the lanes and fire a hail of bullets down them. The aliens come onto the grid from the bottom and try to advance to the top of it where they can run into the spark and destroy it. The types of alien depends on the skill level but on higher levels everything gets thrown at you.

The most basic of the enemies are the flippers which flip across lanes as they advance up the grid. These can appear on their own or by shooting spinning squares called tankers which will produce two of them. Fuseballs are spiky objects which move straight up a lane and have to be dealt with quickly. Pulsars are straight lines that behave exactly the same as fuseballs but are harder to see coming.

SECOND OPINION

This is the most mindless thing I've ever seen, and I love it. The game just throws so much bad stuff at you so fast that desperately frenzied blasting is the only answer. Good movement and firing technique can help up to a point, but you'll get a lot further just hammering the keyboard like crazy. Bin your joystick and get zapping!

AW

A completely new type of alien is the spinning fuseball, which is also released from destroyed tankers and spins around the grid very fast, spiralling upwards as it goes. The last feature is spikes that move up the grid leaving a trail behind, which remains if the head is shot. At the end of the level the spikes grow upwards and you have to get the spark out of the way and to a clear lane before they reach the top.

You can get an admirably heavy rate of fire but you'll need it to deal with the hordes of enemies, and at times you'll have to be very accurate as well.

As a last resort you've got a superzapper that wipes out the whole grid, but you've only got one of those per grid. You need to save this for as long as possible because it's the only way to get rid of aliens that reach the top of the grid. That's a design flaw which isn't present on the original but doesn't harm the action too much.

The vector graphics are quite nicely done although you do get screen slowdown when there's a lot going on. The colour and sound are reasonable, but to get the best

THIRD OPINION

A superb version of an arcade classic. No demands on the grey matter, great for the adrenalin.

MN

SPLIT PERSONALITIES

Domark, £8.95 cass, £14.95 disk, joystick or keys

Domark don't have the most sparkling of reputations on the Amstrad with some notable past 'turkeys' to their debit. But they've certainly broken the pattern with this latest release. It's based on letter-square or tile-sliding puzzles but takes them into a whole new dimension with some very different and entertaining ideas.

The basic idea is to construct a famous face from 20 puzzle pieces – within a time limit and while trying to deal with a number of additional hazards.

It all takes place on a single screen, most of which is occupied by the 25-square playing area. In the top-left square is a box from which the various puzzle pieces emerge. You control a cursor that moves freely around the grid. When it goes into the box you can 'fire' a square out onto the screen.

SECOND OPINION

If you always thought Reagan and Thatcher needed their heads rearranging, here's your chance. If you want to test your skill and reaction speed against a tough time limit you can do that too, but be warned: it's very addictive and incredibly frustrating.

AW

Once a square is in play you can put the cursor over it and slide it in any direction until it hits the wall or another square. When the cursor is placed over a part of the puzzle the relevant square lights up on a smaller version of the picture in the top-right corner of the screen. This shows you where each piece has to end up.

Up to now it just sounds like a simple tile-sliding puzzle, but there are many complications. On three sides of the grid there are sliding doors: squares can be pushed through them when open so that they have to be retrieved from the box. There are also cracks that may appear in the walls: if you throw a square into one it bounces back.

Apart from the picture squares there are also a number of other items that may be thrown out of the box, some good for you and others a real problem. A good old-fashioned bomb, for instance, fuse sizzling. If one of these is thrown out you have only five seconds to chuck it out door or to throw it into a water-tap, the latter action getting you healthy bonus points. If a bullet, double those points by throwing it into a gun. If diamonds, fling two together and extend your time limit.

Characters also have objects specific to themselves that when thrown together give bonus points. These you learn by experimentation but it's usually obvious what will work with what. There are also dangerous items like matches and fuel which don't go very well together.

You need to go for all the bonuses you can because time is very short (you'll often need those diamonds) and an extra life is given only at 100,000 points.

The pictures are quite well drawn and you should have no trouble recognising all the characters. They range from politicians, computer-industry figures and film stars to the royal family and pop stars – a very mixed bunch.

Later levels get really tough: doors and cracks become more awkward and squares bounce off each other if they don't have a wall or another block behind them when they collide.

FIRST-DAY TARGET SCORE
25,000



Who can this be?



Aliens swarm up the grid towards you

from it you need to play in a dark room with a couple of stereo speakers turned up loud.

It's brash, it's mindless, fast and furious – you'll love it.

BW

FIRST-DAY TARGET SCORE
30,000

GREEN SCREEN VIEW

The grid can be very difficult to see on one or two levels, and that means you can get into real problems with pulsars. It's still playable, but do you really need this much frustration?

AW

G O O D N E W S

- **Good vector graphics and lots of them.**
- **Fast and mindless blasting at all times.**
- **A variety of nasty aliens to deal with.**
- **Different grids requiring different approaches.**
- **Becomes a really tough challenge.**

B A D N E W S

- **Not a faithful conversion so fans of the original may miss some things.**
- **Liable to cause extreme wrist cramp.**

GRAPHICS	71%
SONICS	62%
GRAB FACTOR	85%
STAYING POWER	82%
A A RATING	83%

LEVEL: 01
SCORE: 000000
BONUS: 0162

AA RAVE

It's that well-known OAP, Ronald Reagan

The graphics are fun but the real key to the game's success is the addictive and demanding gameplay. You have to concentrate very hard and react quickly to every event, so as to beat the time limit and deal with all the surprise events. There are plenty of levels to keep you going and you'll find it tough not to come back for more every time.

BW

GREEN SCREEN VIEW

There are real visibility problems on some puzzle pieces, but the key at the top of the screen means that it's still playable.

AW

G O O D N E W S

- **Recognisable pictures of the famous.**
- **Very testing and addictive gameplay.**
- **Lots of surprise features like bombs and diamonds.**
- **Increasing difficulty with new features being added.**
- **Needs concentration and quick thinking under pressure.**

B A D N E W S

- **Bombs can pop up in an impossible situation.**

GRAPHICS	65%
SONICS	59%
GRAB FACTOR	87%
STAYING POWER	86%
A A RATING	85%

LEVEL: 01
SCORE: 000000
BONUS: 005000

MASTERGAME

REVOLUTION

Vortex/US Gold, £9.95 cass, £14.95 disk, joystick or keys

No, it's not a film-licensing deal of that mega-flop starring Al Pacino, but a highly original arcade game that will provide many more hours of enjoyment than any silver-screen epic. It's in a grand tradition of Vortex games renowned for their originality, graphics and gameplay.

The game concept and task are extremely simple. You control a bouncing ball; its sole mission is to hit little red cubes.

It has to bounce through eight levels of play. In isometric 3D you see each level rather like a floor of thick floating tiles – a grid of blue blocks suspended in black space. Don't bounce down the cracks!

Somewhere on each grid are four puzzles. You solve them simply by touching one red cube with the ball and then, within a time limit, touching the second.

> **SECOND OPINION**
>
> *Those terribly clever Vortex people have done it again. This one's even simpler than* Highway Encounter, *even more fiendishly addictive and a whole lot more colourful. The game task is huge, but you'll be hooked so completely you'll hardly notice. Pushes your brains and your skills as far as they'll go.*
>
> **AW**

To start with you'll need to get the hang of controlling the ball – crucial to solving the puzzles. Pushing in any direction bounces the ball that way. But be careful about hitting diagonals on a joystick, and remember that the ball won't change direction suddenly or in mid-flight.

Controlling the ball's height of bounce is the most important thing, and this is very cleverly done. You control the energy put into the bounce: you can set it at five different levels using the fire button. Increase or decrease its energy (it shows on a little meter bottom-left) and the ball gradually bounces higher or lower correspondingly. Put in no energy and the ball will eventually just roll around the floor; with maximum power it can leap.

You have to be patient and accurate at times in order to get just the right bounce. Once you've got the hang of the bouncing it's great fun to use and watch.

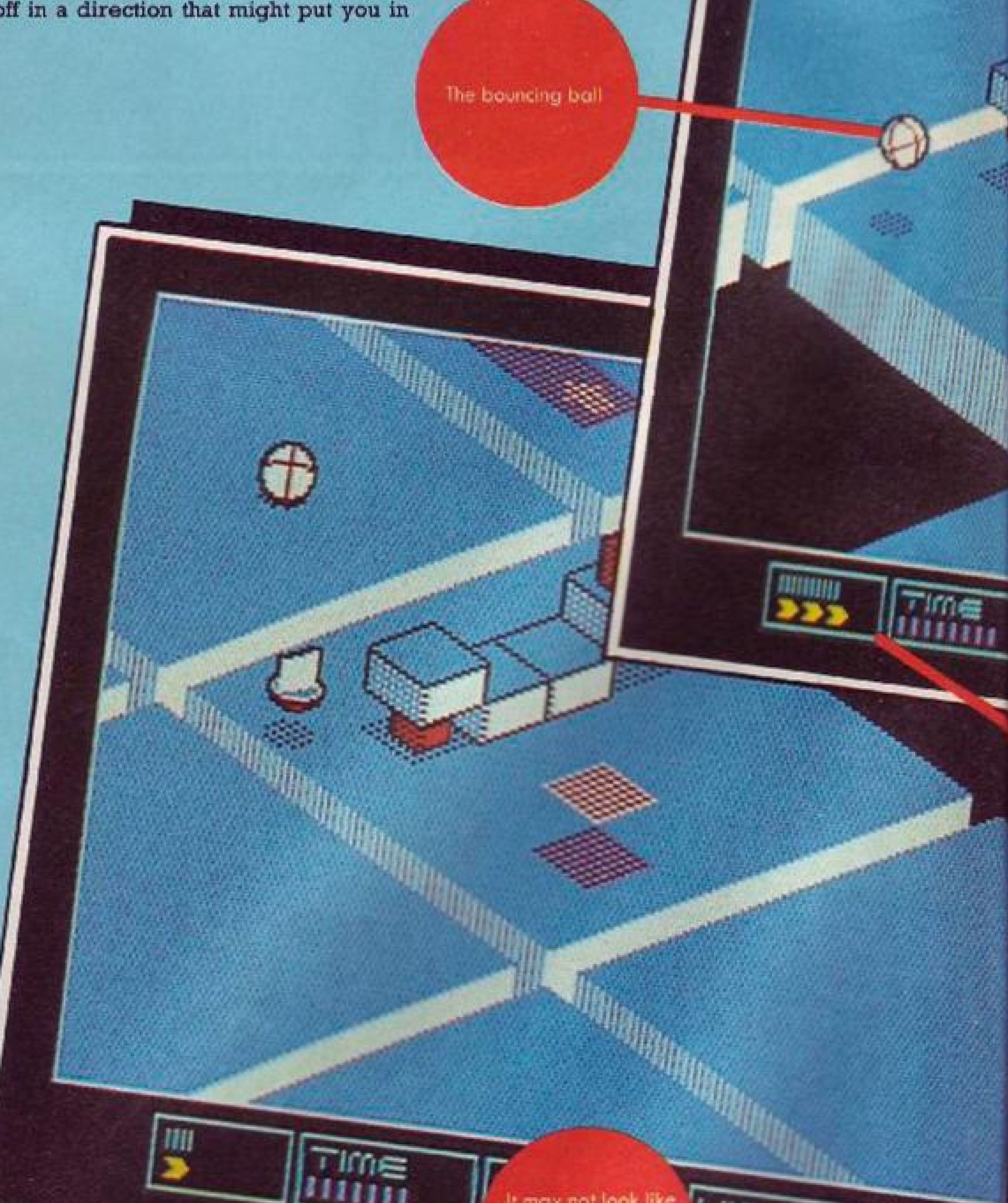
The ball can fall down the gaps between the tiles and be lost forever; the same fate awaits if you bounce off the grid entirely.

There are other dangers lurking amid the puzzles. A nasty breed of spiky ball disintegrates yours if you touch it. Unidentified spinning objects (USOs?) fly randomly about the grid; if they bump you in mid-jump they can throw you off into thin air.

Most of the puzzles look straightforward, but you soon find that controlling the ball accurately and avoiding dangers isn't easy when you're trying to do it quickly – particularly because most puzzles have complications. These are two types of square on the floor, behaving like trampoline or glue: one immediately sets your jumping energy and height to maximum, and the other to zero. Furthermore they have a repelling effect: they slide or launch you off in a direction that might put you in big trouble. These squares are vital for solving some puzzles but you really have to take care around them.

> **THIRD OPINION**
>
> *It takes some time to get used to controlling the bouncing ball – hitting the diagonal is particularly difficult and needs a good joystick – but the puzzles are fiendish and the graphics something else.* Revolution *has been compared to* Spindizzy, *but it is a completely different game really and a vital part of your collection!*
>
> **MN**

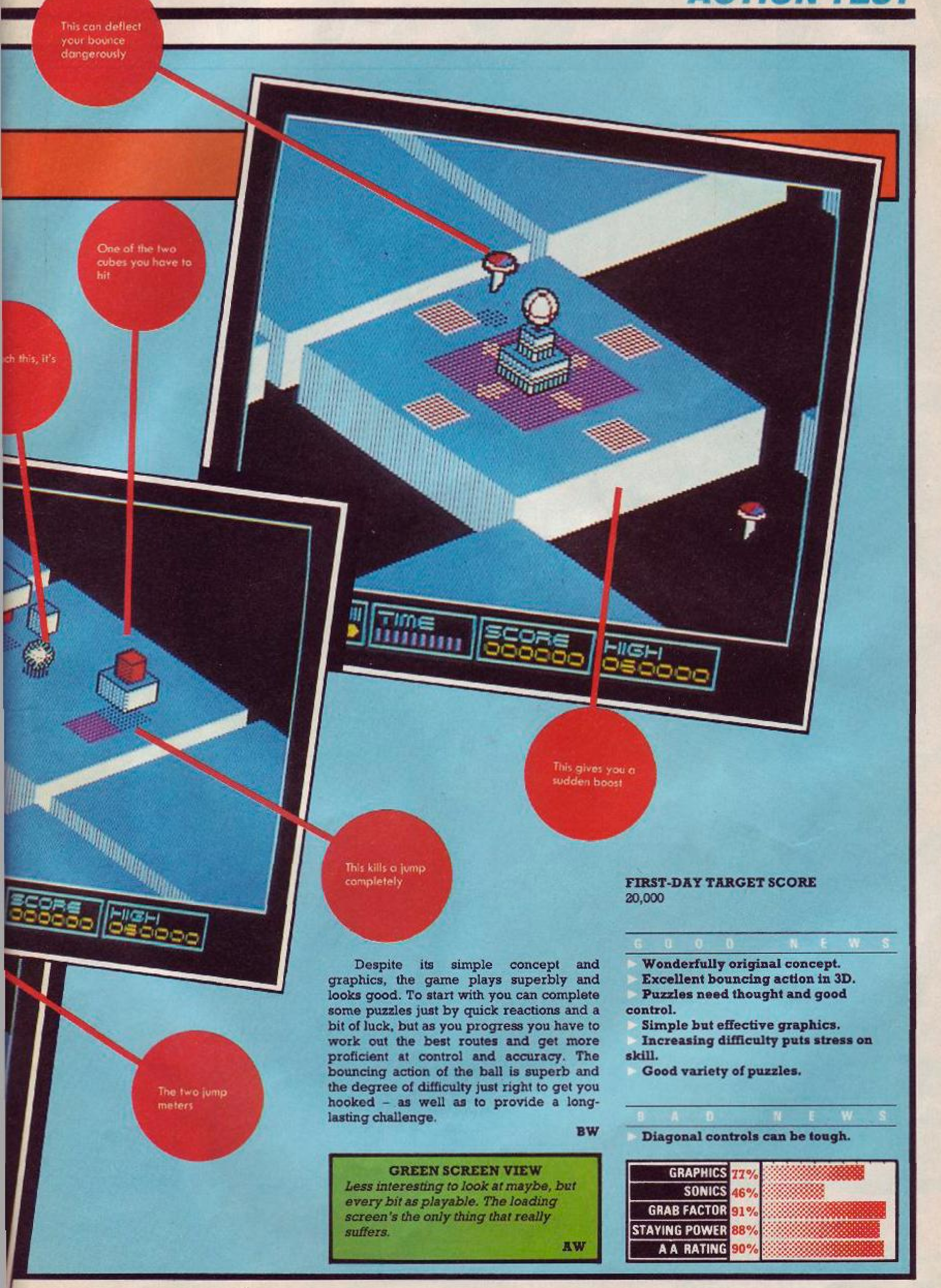
The four puzzles on each level all have to be completed within an overall time limit, before you return to your starting point and go to the next level. You land on levels in a random order so you get to see all of them even without completing the game. This doesn't make the game any easier – as you move to the next level, the time between touching a puzzle's two red cubes is reduced. To succeed, you have to find the most efficient route of getting between them.



Don't ... fatal

The bouncing ball

It may not look like much, but the ball moves well and the puzzles are tough



Despite its simple concept and graphics, the game plays superbly and looks good. To start with you can complete some puzzles just by quick reactions and a bit of luck, but as you progress you have to work out the best routes and get more proficient at control and accuracy. The bouncing action of the ball is superb and the degree of difficulty just right to get you hooked – as well as to provide a long-lasting challenge.

BW

GREEN SCREEN VIEW

Less interesting to look at maybe, but every bit as playable. The loading screen's the only thing that really suffers.

AW

FIRST-DAY TARGET SCORE
20,000

GOOD NEWS

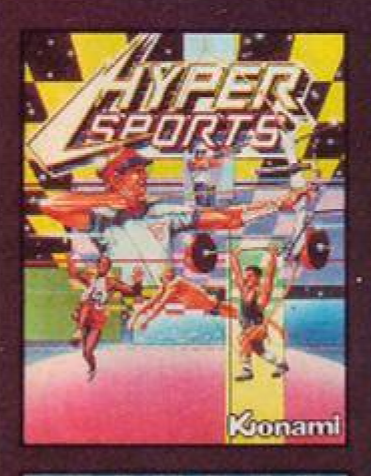
- **Wonderfully original concept.**
- **Excellent bouncing action in 3D.**
- **Puzzles need thought and good control.**
- **Simple but effective graphics.**
- **Increasing difficulty puts stress on skill.**
- **Good variety of puzzles.**

BAD NEWS

- **Diagonal controls can be tough.**

GRAPHICS	77%
SONICS	46%
GRAB FACTOR	91%
STAYING POWER	88%
A A RATING	90%

ARCADE KINGS





SPECTRUM
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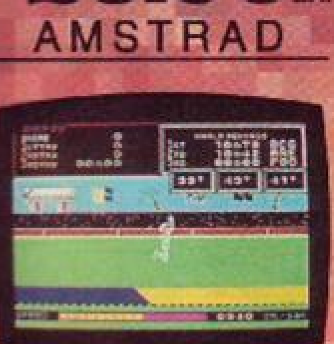
GREEN BERET

Konami





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Imagine ...the name of the game

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PRO-TENNIS

Loriciels/Activision, £9.99 cass, £14.99 disk, joystick or keys

The only other tennis simulation of any note is *Match Point*. That was pretty good – its main problem was that it was just too tough. *Pro-tennis* can put up an equally good battle but is a bit more player-friendly, giving some helpful options.

The court is viewed from above one end, flanked by crowds who always get excited at the end of a game. You can play against the computer or another player or watch an exhausting demo game. On either of its two skill levels the computer is very difficult to beat since it doesn't make many unforced errors – you, however, actually have to hit winners.

You can play the game in two modes, which make the action easy to get into. The automatic mode just gives you the job of positioning the player to hit the ball so that you don't have to worry about the timing of hitting the ball – that's done for you. The manual mode gives you that extra job of timing the stroke and makes the computer that much harder to beat.

SECOND OPINION

The automatic mode really does make this a simple piece of fun. It captures a lot of the atmosphere of tennis while staying very playable. I'm not really a fan of sports simulations, but this one's worth a look.

AW

You can choose from three types of playing surface: clay, grass and hard court. The surface won't initially make much difference to you but affects the bounce of the ball and speed of the players. Matches can be played over one, three or five sets; these can last a very long while because very lengthy rallies are the rule.

The service occurs automatically but can be directed toward one side of the service court. Once the ball is in play the computer is quite happy to sit back and play from the baseline. This means that to win you need to get to the net and either hit outright winners (passing shots, and lobs if he comes in) or force him into lobbing the ball over the baseline. The danger is that he will hit a lob in and you won't be able to get back to it in time.

Although the rallies can be long against the computer, they can also be quite exciting if you're on the net because of the continual effort needed to get the ball back and to try to hit winners as well. The two-player action is of course even more exciting with much more unpredictable play.

The graphics aren't particularly impressive: the players are small and the strokes indistinct. But the action is compulsive. The automatic option and the different courts bring a bit of variety. Most importantly, you'll get a good contest out of it.

BW



Blip, blop, blip, blop – out!

FIRST-DAY TARGET SCORE

Take a set off the computer

GOOD NEWS

- **Tough computer opponent.**
- **Helpful automatic option.**
- **Ball speed varies a lot from fast drives to slow lobs.**
- **More friendly and playable than *Match Point*.**

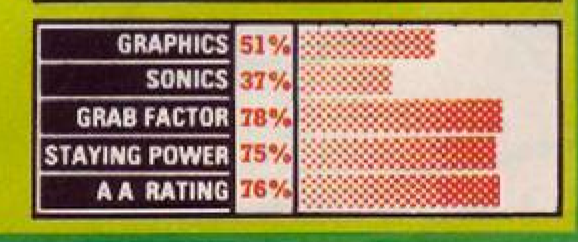
BAD NEWS

- **Rallies with the computer can be very long.**
- **If you've already got *Match Point* it doesn't offer much more.**

GREEN SCREEN VIEW

All the courts look like grass, but otherwise there's no problem.

AW



GRAPHICS	51%
SONICS	37%
GRAB FACTOR	78%
STAYING POWER	75%
A A RATING	76%



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SPACE SHUTTLE

Activision, £9.99 cass, £14.99 disk, keys or joystick with keys

NASA may not be allowed to get the real thing off the ground at the moment, but you can take the shuttle *Discovery* up for a flight or two with this simulation by Steve Kitchen. It doesn't give you the sort of freedom that ordinary flight simulators have. It sets you a tough mission task: fly the shuttle to a strict flightplan, launch and dock with satellites.

You can choose from three types of flight: number one is a demo that shows you exactly how a perfect flight should proceed; number two gives you control of most of the shuttle while the computer gives invaluable aid to the beginner; number three leaves you on your own to solve all the problems.

SECOND OPINION

Morbid curiosity aside, there's not a lot to recommend this one. It isn't realistic enough to be a convincing simulator, but the lack of freedom means it's not much of a game either. A worthy effort, but I just found it too dull.

AW

Your view is from the shuttle's cockpit, with your essential instrumentation and onboard computer display. You start on the launchpad; the first task is to get the shuttle off the ground. A detailed launch guide tells you exactly how to do this step by step, but in the heat of the moment when you're under pressure you might forget something.

Once in the air you need to follow a trajectory that the computer has plotted to get you into space. Once you're up there you've got to achieve a stable orbit before you can launch the satellite. Once again you're given plenty of information on what to do, so that just following the instructions should get you through.

Now comes the fun part: launching the satellite. You are treated to an excellent view of the payload bay as the satellite spins out of it and then round to the front of the shuttle and off into orbit.

Having got rid of one satellite you can go dock with some others, which enhances your rating when you get back to Earth. You can dock with as many as you like, but each successive one gets harder to do.

GREEN SCREEN VIEW

No problems with visibility, but it still doesn't look very realistic.

AW

Once you're bored with whizzing around the Earth you can re-enter and land at Edwards Air Force base. Once again you're given detailed instructions on how to get down and a trajectory to follow as you descend to the runway. When you get within range the runway appears in the view and you glide in for a landing.

It will take a bit of practice before you can do the whole mission properly but it's quite easy to get started and to know the flight controls. The graphics are quite bare except for the payload-bay scene. The sound consists purely of engine noise and warning signals. As a simulator it's pretty good, but as a game it doesn't really have enough variety to keep you interested for long.

BW

FIRST-DAY TARGET SCORE
Complete flight 2

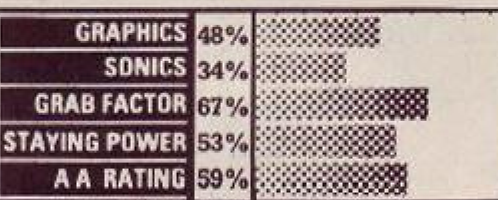
G O O D N E W S

- ▶ **You've always got plenty to do.**
- ▶ **Good picture of the payload bay.**
- ▶ **Docking with satellites provides the lasting challenge.**

B A D N E W S

- ▶ **No variety once you've learnt the mission.**
- ▶ **No freedom of action; you just have to follow the flight plan.**





GRAPHICS	48%
SONICS	34%
GRAB FACTOR	67%
STAYING POWER	53%
A A RATING	59%

Set to go on the launch pad



FIVE-A-SIDE SOCCER
Mastertronic, £2.99 cass, joystick or keys

Mastertronic have been producing some excellent games lately and I suppose the run had to come to an end somewhere. This is it. As football games go it's one of the worst I've seen. It doesn't even deserve a 99p pricetag, never mind the £2.99 it's costing.

It follows the familiar pattern of other football games, but with less impressive graphics and gameplay. The pitch is viewed from the side and is composed of three screens, a goal at each end. The teams have five players each (seems logical for five-a-side football) with one player as the goalkeeper, who can't be moved out of the box around the goal.

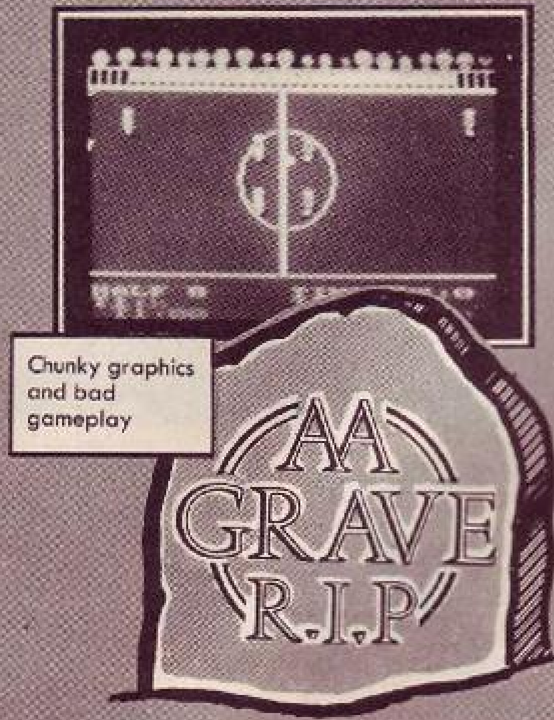
You control one player. You can either leave it to the computer to choose which or select him yourself by cycling through the players on screen. You can compete either against the computer or against a mate. Either way there isn't much variety to the playing action. The computer plays very predictably; although it will score goals you can easily put away more.

The pitch is narrow. Because the rules are five-a-side there aren't any corners, throw-ins or any other set pieces.

The gameplay consists of getting behind the ball and booting it forward a few times; if you're lined up with the goal you just have to keep kicking and it will go in. The opposition will do likewise. To stop them you just have to run past them, turn around and run head-on into the relevant player, kicking wildly.

> **SECOND OPINION**
> *Dear me. Once upon a time, Mastertronic had a reputation for producing cheap trash. Through hard work and strict quality-control they cleared their name and showed the world that cheap needn't mean nasty. Another game as miserably bad as this one though, another one as unspeakably awful, and they'll be right back to square one.*
> **AW**

If enemy action gets close to the goal, control switches to your keeper but it's usually too late to do anything about a goal being scored.



Chunky graphics and bad gameplay

The graphics are chunky and garish and the gameplay very monotonous. A rather sorry product, and the sooner it's forgotten the better.

BW

FIRST-DAY TARGET SCORE
Beat the computer by 5 goals

> **GREEN SCREEN VIEW**
> *Visibility problems are really neither here nor there – I mean, the game is a complete hole in the ground.*
> **AW**

G O O D   N E W S

- **There'll be a lot of goals scored.**

B A D   N E W S

- **Chunky, garish graphics.**
- **Predictable computer opponent.**
- **Boring gameplay.**
- **No other options or features except a two-player game.**

GRAPHICS	18%
SONICS	30%
GRAB FACTOR	17%
STAYING POWER	16%
A A RATING	17%

OLYMPIAD '86
Atlantis, £2.99 cass, joystick or keys

Here's yet another multi-event sports game, but one that doesn't involve any waggling or keyboard-bashing. It features five sports: weightlifting, canoeing, 100 metres, skeet-shooting and discus. I don't think most armchair athletes are going to find much here to interest them.

Weightlifting is the first event. You have to lift gradually heavier weights to reach a qualifying level. The lifter is poorly drawn and animated. Your method of making lifts is even worse: a pointer spins around a circle at the bottom of the screen, and when it's pointing straight up you have to press Fire to stop it. Get it right and it's a good lift, miss it and you lose one of your three lives. As the weights get heavier the pointer spins faster.

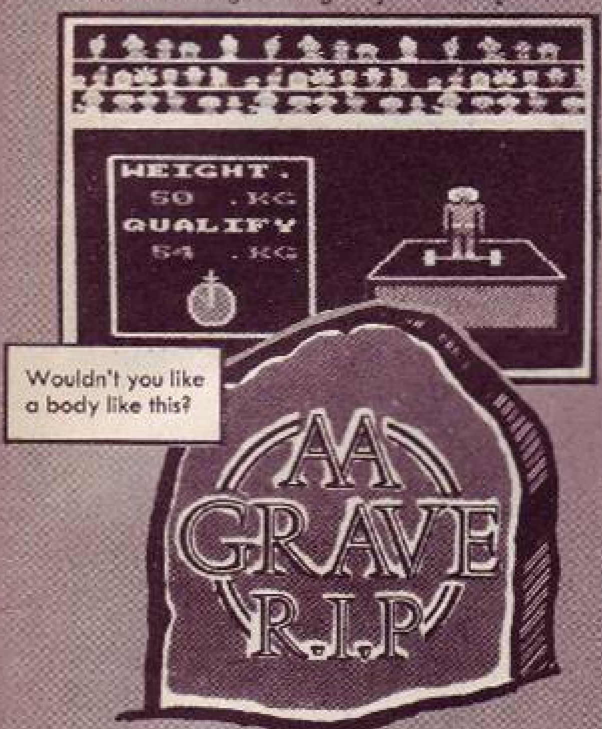
> **SECOND OPINION**
> *It's a funny old business, this computer-games lark. Just when you think you've seen the worst game imaginable, someone goes and brings out something much, much worse. You'll laugh at the graphics on this one, weep at the waste of three quid and fall asleep over the gameplay. I'd have preferred a waggling game, and I hate waggling games.*
> **AW**

The second event, canoeing, has better graphics but familiar very simple gameplay. Your canoe (a kayak, actually) appears in the middle of the screen, viewed from above, and the occupant paddles with just two frames of animation. Rocks appear at the bottom of the screen and move up it. You have to move left and right to avoid

them. If you hit a rock a life is lost, otherwise you have to complete a certain distance down the course.

The 100 metres is next. Here the animation is better but the gameplay just as bad. The run stays in one spot on the screen while the crowd jerks by behind him. To make him run faster you have to press Fire in conjunction with a spinning pointer, as in event one, but this time you have to keep repeating it to keep the speed up and make the qualifying time.

The fourth event is skeet-shooting, although by this time you'll probably want to do a bit of author-shooting. A cursor and two trees appear on screen and from the bottom of the screen a grey brick will spin up. You have to put the cursor over it and press Fire to destroy it before it flies off screen. A set number of skeets have to be shot, but hitting more gets you more points.



Wouldn't you like a body like this?

The final event (heavy sigh of relief) is the discus. You first have to set the power of the throw with the familiar spinning pointer and then the angle by stopping a number that gradually increases. This time a white spinning brick moves across screen and you hope it passes the qualifying distance.

Then it's back to the first event. Go through it all again with the qualifying getting tougher until you lose all three lives.

The graphics are dismal, the sound is hopeless, the gameplay is horribly simple and even at £3 it's a waste of money. The fact that it's budget software is no longer an excuse for bad product like this.

BW



F[illegible]AY TARGET SCORE
40[illegible]

> **GREEN SCREEN VIEW**
> *If you shelled out three quid for this, I should think green is the word.*
> **AW**

G O O D N E W S

- ▶ It's cheap.
- ▶ It's quite tough as you progress.

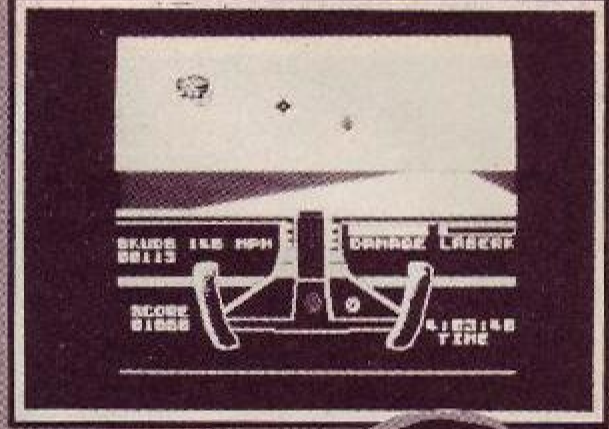
B A D N E W S

- ▶ The graphics are bad.
- ▶ Very little sound.
- ▶ Very simple gameplay.
- ▶ Little variety in your task.

GRAPHICS	33%
SONICS	16%
GRAB FACTOR	20%
STAYING POWER	18%
A A RATING	19%

KNIGHT RIDER

Ocean, £8.95 cass, joystick or keys





My scanners are picking up a naff game, Michael

hope you haven't been holding your breath for this one because KITT appears to have been worked on in Ocean's garage for quite a while. Now he and his do-gooder driver are out, but when you get a look at the game you're going to wish they'd scrapped him and cubed him in a metal-crusher.

The game begins with our eager TV heroes revving to go in Atlanta. They can choose one of four dastardly plots to foil within a time limit. A network of roads connects several major cities in the Excited States, and at each city there is an operational base of some kind. These consist of a single screen. On visiting the one at Atlanta you'll discover where you need to go first.

You choose a city off a menu and then have to drive there. The view is from the driver's seat – the only things you'll see while travelling between cities are enemy helicopters and the road.

> **SECOND OPINION**
> *It really looked at one point as if this one wasn't going to come out at all, but no such luck. If this was a budget game it would be miserable value for money. There's almost nothing to it, and what there is looks dated and poorly executed. I'm amazed that Ocean have the gall to charge money for this at all, but £8.95 is just comical.*
> **AW**

You can choose to drive or shoot helicopters, while KITT performs the other job. It's best to drive yourself and let KITT do the shooting, since you can drive twice as fast and he'll probably shoot straighter.

Driving is just a matter of accelerating as hard as possible and steering around the occasional incredibly predictable bend. It takes no skill at all. Even damage caused by missiles from the helicopters and bumps with the side of the road doesn't liven up the proceedings. If you do want to shoot helicopters it's just a matter of guiding a cursor around the screen and firing an invisible laser.

After getting bored at the wheel for an eternity you arrive at the city and can enter the operational base there. You now control a figure viewed from above who has to get from one side of a room to the other, avoiding contact with the guards there.

This is the really exciting bit: the guards can shoot at you or touch you to knock a lot off the time limit. The guards at some bases will home in on you because they're 'trained killers' – which means they aren't wearing blinkers, unlike the rest of them who keep to movement patterns as you go straight by them, merely letting loose the odd bullet if you're in their path.

If you get to the other side of the room you're given the next location to go to. If you can resist the overwhelming urge to hit the reset keys, you're off on another car ride over a featureless highway.

The graphics are bad, the in-game sound is bad, the collision detection at bases is lousy, the gameplay is boring and as licensing deals go this is the worst.

BW

FIRST DAY TARGET SCORE
Stay awake

> **GREEN SCREEN VIEW**
> *You can still see well enough to play, I'm afraid.*
> **AW**

G O O D N E W S

- ▶ I liked the title tune.

B A D N E W S

- ▶ Unimpressive graphics.
- ▶ Bad collision detection at bases.
- ▶ Monotonous gameplay.
- ▶ The worst-ever licensing deal.
- ▶ You have to wait for very slow-scrolling messages.

GRAPHICS	31%
SONICS	45%
GRAB FACTOR	19%
STAYING POWER	15%
A A RATING	18%

THE APPRENTICE

Mastertronic, £1.99 cass, joystick or keys

The name of the game might be enough to give away the origin of this game but you'll be in no doubt as soon as you start playing. The classic *Sorcery* was obviously the inspiration. Even though this game (by James Higgins) isn't as good as the original it has a lot to offer at £1.99.

You play an apprentice wizard who's made a real hash of a nasty spell, and has to rectify it by collecting 10 rings. To collect each ring you'll need a little bit of help from a friendly wizard, who requires a specific object if he's going to help you out. If you can find the object and get it to the wizard, then he opens up a section of the game where a ring can be found.

The screens are very reminiscent of *Sorcery*, but the graphics aren't as atmospheric or as fast-moving. There aren't any doors either so the apprentice just moves off the edge of one screen and onto another. The apprentice moves about screen rather slowly but you can fly and walk him anywhere on screen.

SECOND OPINION

There's an awful lot to explore here, but not a great deal of incentive to do so. The graphics are okay, but the gameplay just sort of plods along. The name may suggest comparisons with Sorcery *but the action very definitely doesn't. Still, it's cheap I suppose.*

AW

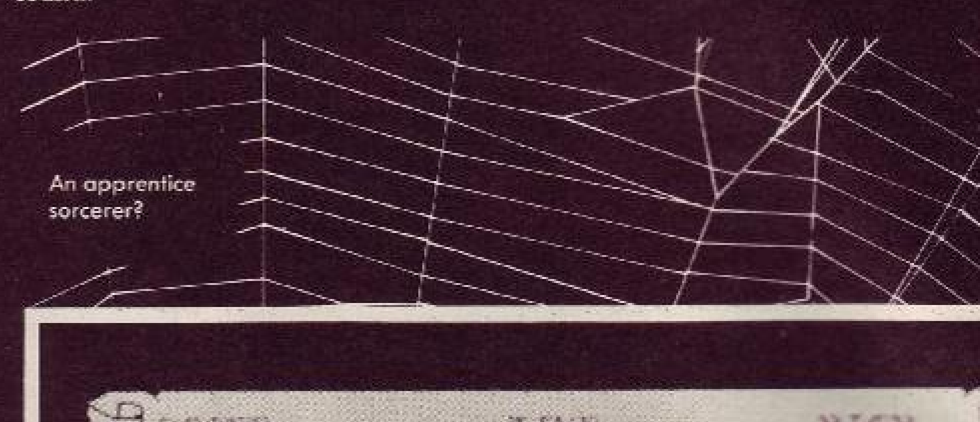
There are plenty of threats to your meagre lives including arrows, skulls, spinning stars, birds, dragons and demons. These all follow movement patterns and can be either avoided or blasted with your limited supply of lightningbolts. However that measure is only temporary: if you re-enter the screen the monsters will have reappeared.

The objects that allow the wizards to cast a magic spell include a treasure chest, flag, gold key and horseshoe. To find out which object works with which wizard you just have to drop it while standing on the same spot with him. If nothing happens you've got the wrong object. The right object will cause a section of the scenery to slide away and you can go through it to some new screens where a ring will be found.

You can also remove sections of the scenery with a special scroll that can take out a chunk of wall. This will make it possible or easier to get to an area of the game or an object. These need to be used sparingly, of course, just in case you come up against a real impasse.

All ten rings have to be recovered within a time limit, but this is quite generous and should give you ample time.

An apprentice sorcerer?



Much more of a problem is landing on a screen to find a monster headed straight for you or right on top of you. This can put you into an infinite death loop that can ruin a lot of hard work.

Even though the game isn't original it's very competently done and provides an excellent challenge for any arcade adventurers who liked *Sorcery*. Its major problem is speed:the action is quite sedate. Despite that you've still got a lot to cope with and have to concentrate hard.

BW

FIRST-DAY TARGET SCORE
10,000

GREEN SCREEN VIEW
Ugly but visible.
AW

G O O D   N E W S

- **Good colourful graphics and monsters.**
- **Large, well designed playing area.**
- **10 wizards take quite a bit of finding.**
- **Disappearing sections of scenery are good.**

B A D   N E W S

- **Action is quite slow.**
- **Not very original.**

GRAPHICS	67%
SONICS	54%
GRAB FACTOR	78%
STAYING POWER	77%
A A RATING	78%

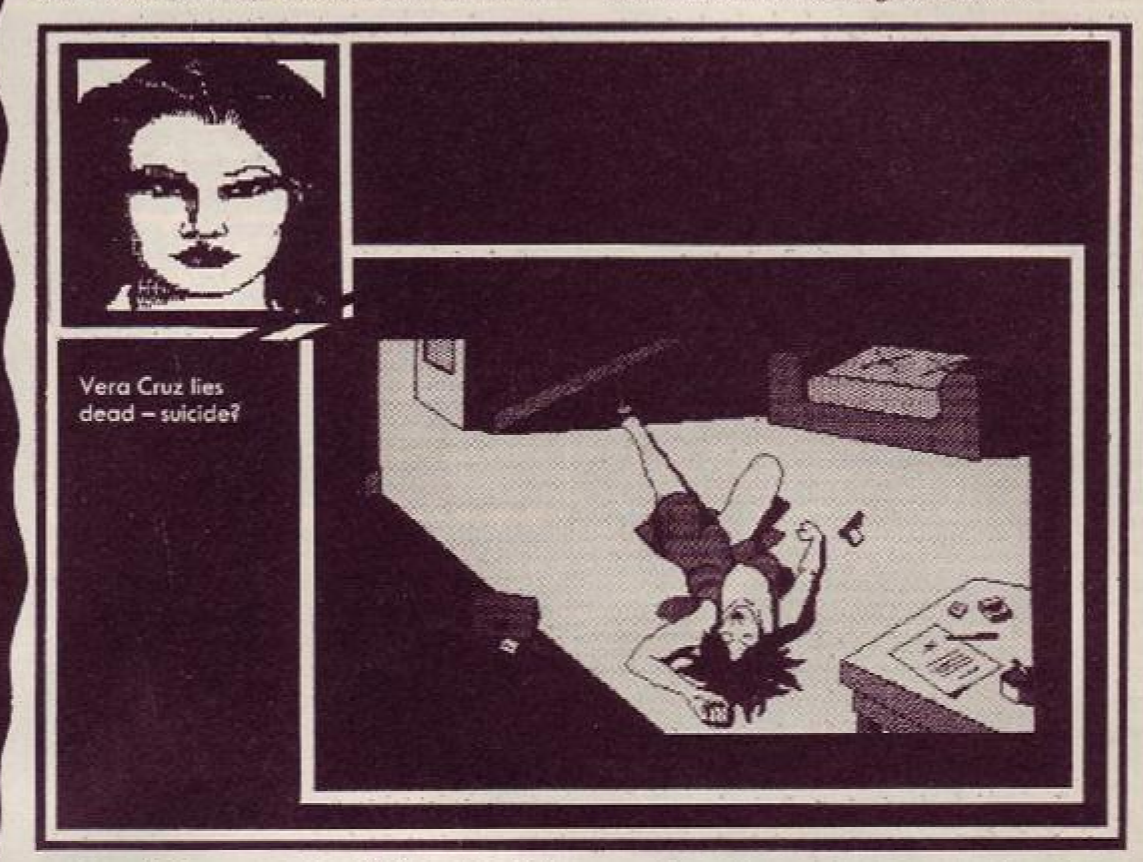
THE VERA CRUZ AFFAIR

Infogrames, £9.95 cass, £14.95 disk, keys only

The latest French import puts you in the role of a *gendarme* investigating a suspicious death, which is first thought to be suicide but soon looks far more sinister. The game loads in two sections, the first one giving you a chance to examine the scene of the incident and the second to investigate using the police computer network.

The scene of the supposed suicide is a single, macabre but detailed and well drawn screen, dominated by the dead body of Mlle Vera Cruz. Scattered around on the floor and furniture are various objects and clues that have to be examined. You control a cursor on the screen that can be placed over the various objects, which can then be examined in greater detail to provide information that may be a clue or may be misleading.

You'll need to note down on paper all of the information you find because you can't look at it again once you leave this section of the program. Make sure you examine everything you can because even the smallest object may reveal something interesting.



When you're finished, the second part of the program has to be loaded. This takes you to your office, where you can communicate with all the other police and judicial services through the Diamond Computer Network.

You have six main options while using the computer: send a message, print out a screen (if you've got a printer), see a statement from a witness, compare evidence, make an examination, and arrest the guilty party.

SECOND OPINION
I'm sure there's a good game in here, but poor translations and general unfriendliness mean it's just too difficult to get at. Even the most patient of detectives can only put up with 'addressee inapplicable' so many times before he hands in his badge.
AW

Messages can be sent to various branches of the local and national police, prisons and judicial information centres, in an attempt to gain useful information. Or messages can be used to find out further details on an individual who may be known to one of the other services. Or police elsewhere on the network may know something of a particular piece of evidence.

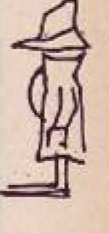
The main problem with these communications is that you have to get only one part of the message wrong and you always get the same message 'Addressee not applicable'. This means you don't know whether you made a typing mistake, used the wrong form of message or the service really had no information on the question.

Consequently you can be fishing about in the dark not knowing what's going on, purely because you can't communicate with the computer properly. The instructions are not exactly over-helpful on this matter either, a situation exacerbated by their translation from the original French.

The other options are much easier to use since they require less composition of messages. There are still hitches though: when performing an examination, for example, you are told you can make a 'graphological' examination, but you're not told exactly how to do that.

If you can penetrate these problems there is a very good game underneath with plenty of nice touches. There are the facial pictures of suspects, the need for deductive reasoning and of course the need for a policeman's perseverance. It's a shame that this is marred by the impenetrable replies of the computer to so many enquiries, 'addressee not applicable' and 'without interest'. A good game, but one that could do with being a lot more helpful and user-friendly.

BW



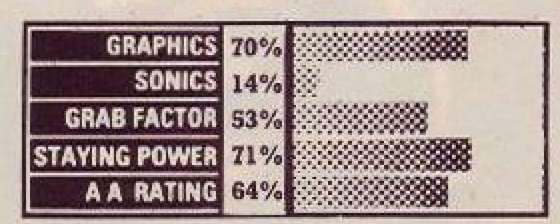
GREEN SCREEN VIEW
Still playable, and still impenetrable.
AW

G O O D   N E W S

- **A difficult case that takes some solving.**
- **Nice touches like the suspects' faces.**
- **Needs a lot of thought.**

B A D   N E W S

- **Very unhelpful responses to unproductive questions.**
- **Translation is unhelpful in places.**
- **Takes a lot of getting into.**



GRAPHICS	70%
SONICS	14%
GRAB FACTOR	53%
STAYING POWER	71%
A A RATING	64%

CON-QUEST

Mastertronic, £2.99 cass, joystick or keys

At first sight you might be tempted to write this off as just another game where you run round umpteen screens picking up some things and shooting monsters. However a closer look reveals more depth to the game (by Derek Brewster), with lots of different objects that can be examined and used in different ways.

The action takes place in a castle which has been occupied by the demon Grell and his monstrous minions. Your task as the cute character Oscar is to rid the castle of Grell, but you've got to do a lot of exploring and use many objects to achieve that.

The castle's rooms are shown in 3D from one side. Most of them have furniture, wall decorations and of course monsters. Most of it is well drawn, but suffers from an unimaginative use of colour: each character, object and furniture item is just a single colour. There's a maximum of three monsters to a room and they whizz about randomly, sapping your energy when they touch you.

You can combat the creatures with weapons that you find, including a boomeranging axe and a magic wand, but you'll need some knowledge as well before you can use the wand. Once you've picked up an object you can use three other options on an icon menu at the bottom of the screen: drop it again, examine or use it. Sometimes examining it will reveal some useful information; when trying to use it you may be told you don't yet know how to.

SECOND OPINION

This one's fairly good value and there's a lot to see, but it's all pretty dreary stuff. There is only so much you can do with this kind of exploration/collection effort. Well enough presented, but nothing at all original or exciting.

AW

Usually you can carry up to five items and be able to examine and use any of them. There is a globe of invulnerability – you can store up to nine items in it and trundle it around the rooms, but you can't use objects from inside it so you won't be able to kill off creatures on your way.

Oscar in the dreaded castle

There are many of the standard arcade-adventure features to the game like keys that will unlock doors to reveal more of the playing area. There are also healing and poison potions, so be sure you know which is which.

There isn't much sound in the game but what effects there are are nicely done. Some of them appear to pop up during play for no apparent reason, but the random twiddles and bloops are quite pleasing. The graphics are the most disappointing thing about the game.

The gameplay, however, has a lot to offer in the way of exploring, shooting and the odd bit of puzzling. There's nothing very original here but this type of game hasn't appeared so much on the Amstrad as on other machines, so a lot of you should enjoy it.

BW

FIRST-DAY TARGET SCORE
40%

GREEN SCREEN VIEW

Visible enough, though the odd bit of blue-on-black causes problems.

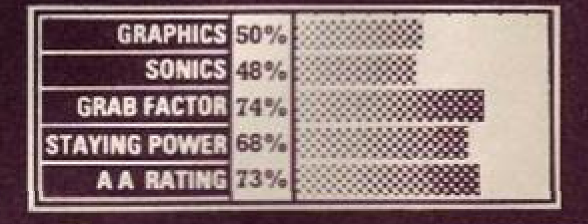
AW

G O O D   N E W S

- ► **Quite a large playing area.**
- ► **Good use of icons within the game.**
- ► **Lots of objects to use.**
- ► **Good combination of exploring, shooting and puzzling.**

B A D   N E W S

- ► **Unimpressive use of colour.**
- ► **Not much variety in the gameplay.**



GRAPHICS	50%
SONICS	48%
GRAB FACTOR	74%
STAYING POWER	68%
A A RATING	73%

GOLDEN PATH

Amsoft, £12.95 disk, keys or joystick with keys

There still aren't too many disk-only games around, despite the huge success of the 6128. This effort from Amsoft (written by Magic Logic) is set in the Orient, where a monk has to achieve enlightenment by lighting incense before the great Buddha in a golden temple. To achieve that you've got to solve a fair few arcade-adventure problems and explore the delightfully drawn scenery of the far east.

The name of the game derives from the yellow line that the monk follows through the screens in the game as they wind up and down the hills and to various locations. You can't deviate off the line, but there are junctions where it forks or leads into buildings. Your life as a monk starts as a young man and the quest has to be completed before you age too much and become an ex-monk that has ceased to be.

As you wander along the path you'll encounter animals and people who may block it and have to be dealt with somehow. This could be by giving them an object or by fighting them – the only way to find out is to try it. There are also mechanisms that can be used, but again you may need the right object or person to activate it.

Objects you find can be carried, stored in one of your four pockets, or even thrown at something. You've also got the ability to jump, duck, block, punch and push – you can also experiment on people and objects. Many of the animals and people will attack you; unless you're prepared with an adequate defence you'll lose a life. (Presumably as a Buddhist you don't kill others.)

Making your way along the path isn't always easy. It disappears in places, and you have to search for possible routes.

Far more annoying is the way the disk-drive is continually accessed. Whenever you change screens, perform some actions or die, the disk always spends an eternity whirring around to load more data. This quickly gets very wearing and tedious and is exacerbated by the need to flip the disk over when entering some parts of the game.

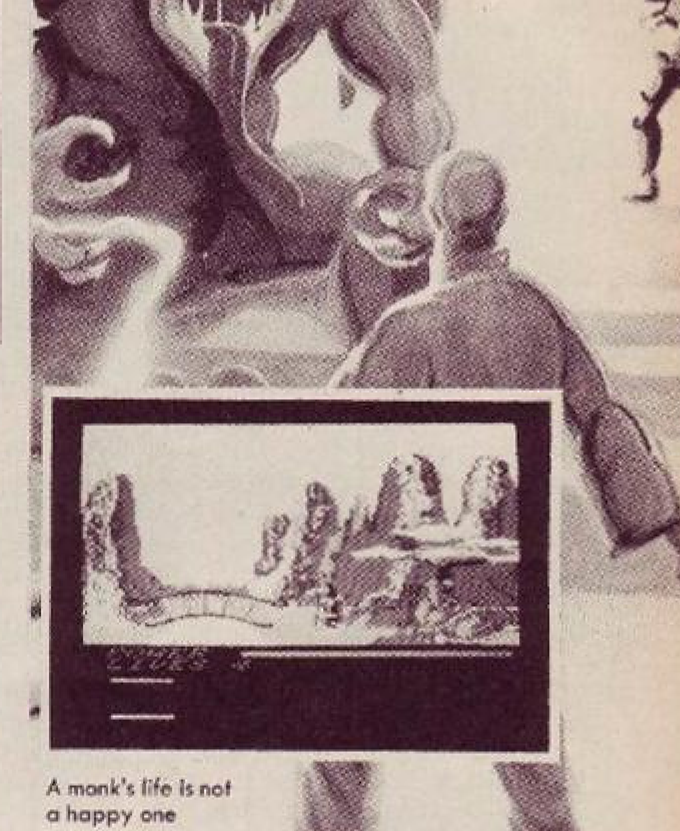
There's actually a reasonable arcade-adventure game: the graphics look good and there are some pleasant puzzles. But putting up with the wildly infuriating disk problems while trying to explore will be a bit too much to ask even of the most patient gamesplayer.

BW

SECOND OPINION

Well what do you know – it's a game that's unplayable in a whole new way. I'm just amazed at the nerve it must take to market this thing. There may be some interesting puzzles in here, but nobody's going to have the patience to get anywhere with them. Dazzlingly stupid.

AW



A monk's life is not a happy one

GREEN SCREEN VIEW

The landscapes lose a lot of their scenic appeal, and that's pretty serious. After all, you're going to be staring at them for a long time waiting for the disk to stop running.

AW

GOOD NEWS

► **Good graphics for characters and backgrounds.**
► **Some interesting puzzles to solve.**

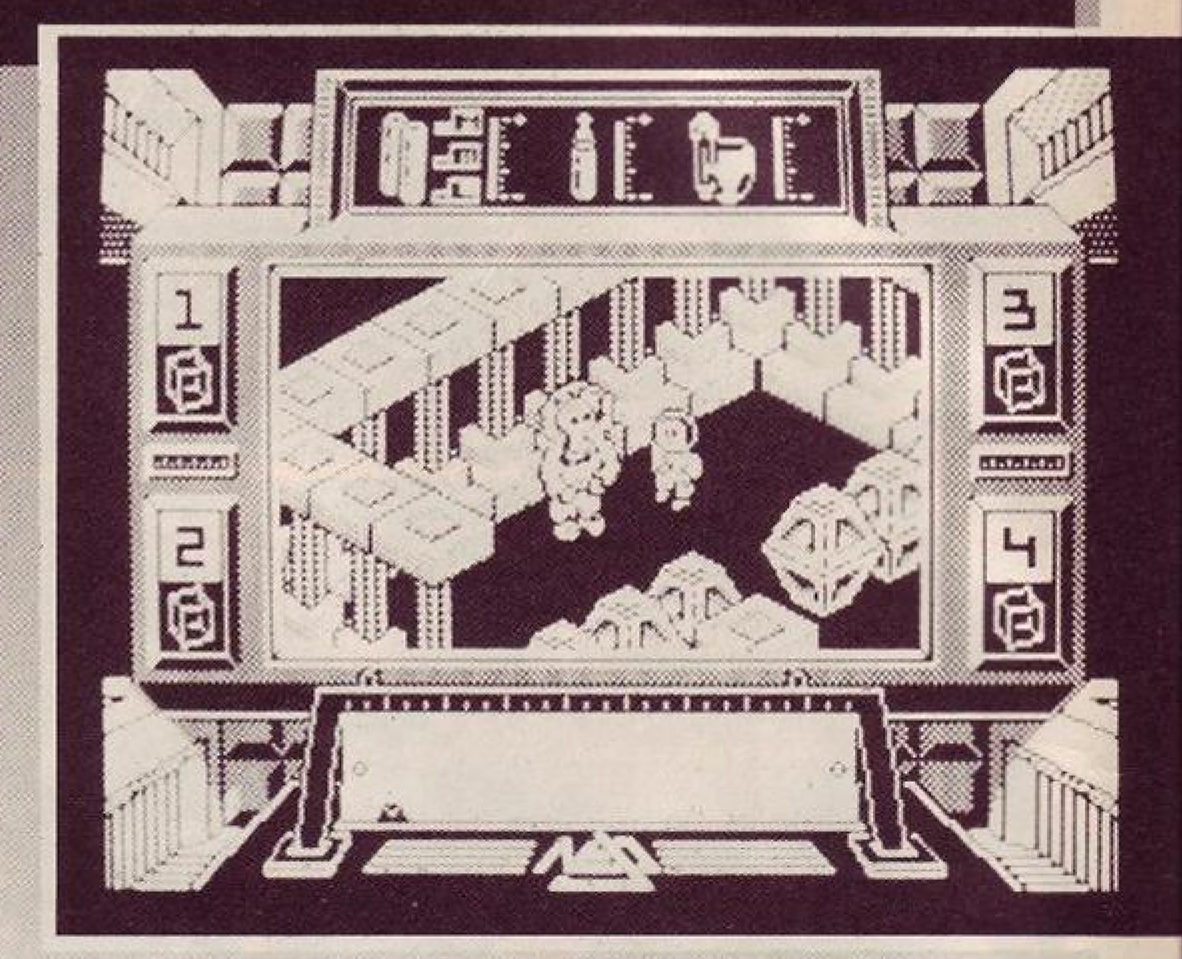
BAD NEWS

► **The disk-accessing would try the patience of a saint.**
► **Not only continual accessing but you have to flip the disk over as well.**
► **Incredibly difficult to explore the game and discover things while trying to put up with such problems.**

GRAPHICS	74%
SONICS	27%
GRAB FACTOR	15%
STAYING POWER	42%
A A RATING	31%

beyond Thundergames

PRODIGY
Electric Dreams



Set in the Mechlabs of the Machine Sorcerer Wardlock, this impending Electric Dreams title is an arcade adventure. There's nothing new about the perspective you view the Mechlabs through – it's good old isometric 3D just like *Batman* – but where conventional games switch screens, *Prodigy* uses a scrolling display.

You play Solo the Syntleman, an experimental synthetic human created by Wardlock, and your task is to escape from the Mechlabs. That's not all – you have to take your friend Nejo with you. Nejo is only a baby though, so you'll have to feed him, protect him and change his nappy while collecting the items you need to escape.

There are dangers along the way in the form of Wardlock's earlier attempts at synthetic life, the Bloberites and the Globewels. There are also some tricky obstacles in the form of icy surfaces and invisible walls, and there's a teleport network to learn your way round. If you're an exploration freak with a taste for cute graphics, this is one to watch out for.

TRAILBLAZER
Gremlin

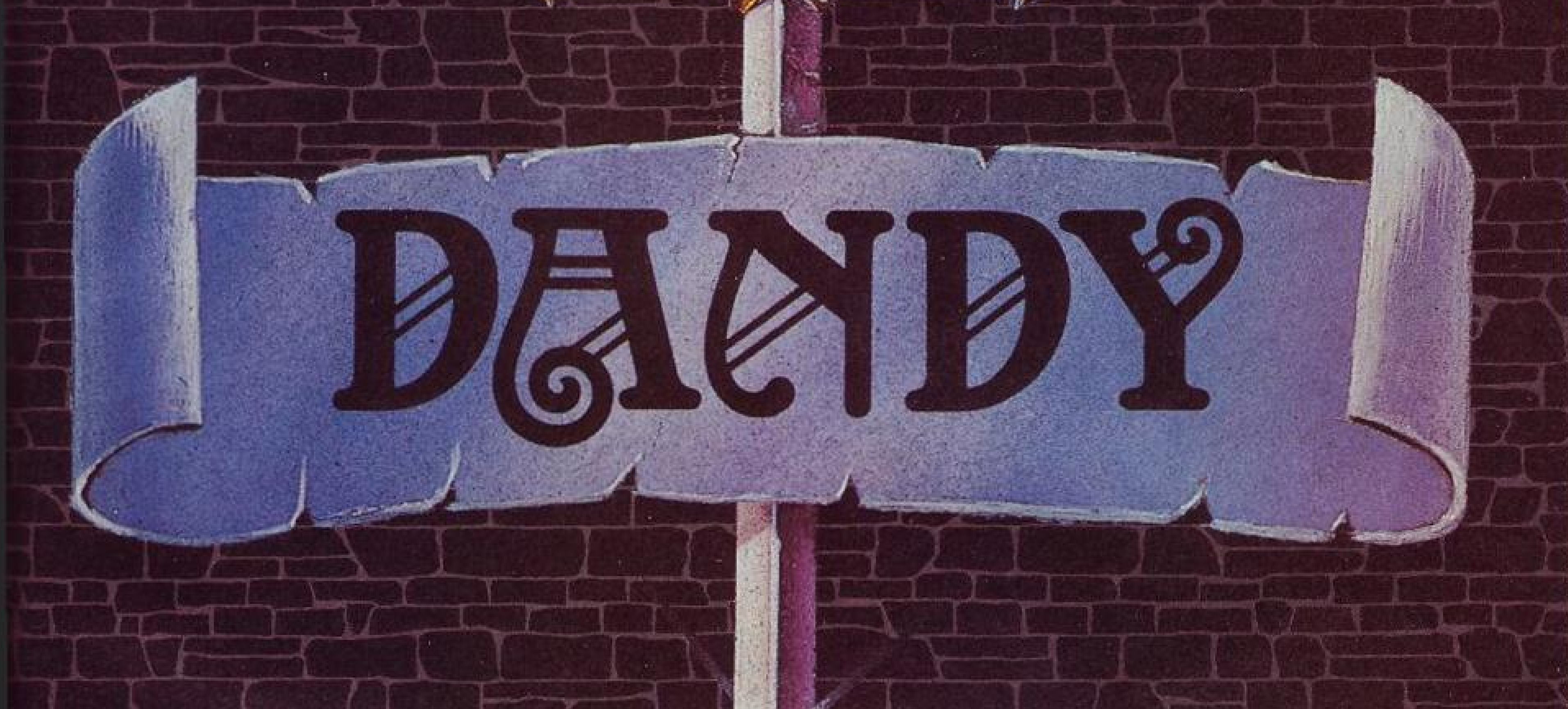


This fast arcade-action game previewed at the PCW show is another example of the latest games craze – abstract bounce-em-ups! Gremlin is hardly jumping on the bandwagon, mind you: with *AA* Rave *Thing on a Spring* and Mastergame *Bounder*, they practically invented bouncing.

The game idea runs like this: you control a ball as it bounces down a long multi-coloured path. You have to get to the other end within a given time limit, using the different coloured squares to help you. Some squares make you bounce, some speed you up and some slow you down. Worst of all are blue squares which reverse your controls if you land on them, and the numerous holes in the path which lose you considerable amounts of time.

Like all the most addictive games, it just sounds too simple to work. It's not just addictive though – with your viewpoint directly behind the ball, the path zooming by underneath you, it's exhilarating and graphically appealing. Wacky extra features on the disk version should give you a few laughs as well.

Watch out for the full review next month.



All that's gold does not glitter. In fact some peoples dungeons can be a right royal let down.

Dandy is the massive arcade adventure that takes you through some of the most detailed dungeons you've ever seen. Either solo or with a (brave) friend you can hack, thump and zap your way through spectres, necromancers and other dungeon-dwellers whose concern for your health and well-being is zero.

They have their reasons of course. They're guarding a massive treasure hoard which you, if you're quick, can stuff into your amazingly capacious swag bag.

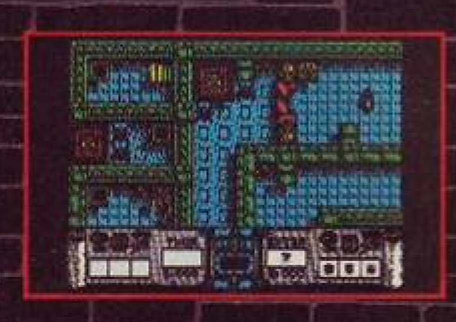
Dandy is the ultimate dungeon. Enter at your peril!

FEATURES

- 3 complete 5 level dungeons
- Treasure trove screens at the end of each dungeon
- One or two players
- 5 different spell types
- A variety of nasties
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AVAILABLE ON:

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Available November
FUTURE KNIGHT
TRAILBLAZER
Thunder into the unknown at a breakneck speed, pushing your reflexes to their limits in this definitely exhilarating journey that's not one for the fainthearted. Roll left, roll right avoiding the endless chasms of doom that lay in and around the squares of mystery. Squares that will sometimes slow your progress, on occasion with fatal consequences and sometimes speed up unexpectedly or make you jump automatically. Keep a keen eye on the clock as the quicker you complete your task the higher will be your bonus. CBM 64 version is an amazing 2 player simultaneous game. Amstrad Disc version contains extra features.
Trailblazer
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Pit your wits against a Criminal Genius...

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GENDARMERIE







ADVENTURE

Hail to thee, blithe Pilg!
Despite the Cowled Crusader's attempts to take a well-deserved holiday this month, Warlock Nicholson has summoned me from my retreat at Land's End to provide thee with these pages of dazzling entertainment.
So put on thy sunglasses, and get thee stuck into this month's offering from the man with the Ambre Solaire and the copy of Interceptor's After Shock!

Pilgrim

After Shock

Interceptor, £9.95 cass, £14.95 disc

Interceptor has been on the verge of producing its latest game *Earthquake* for some months now. The company finally released it at the PCW show in September with a new name and – eek! – a fatal bug. Typing PRESS, or other ill-fated commands, would instantly produce a screenful of garbage and prevent further progress in the game.

The Cowled Crusader is glad to report that this mishap (due to an over enthusaistic disk-protection program) has now been cleared up. So you can buy the game with confidence as far as bugs are concerned.

But what about the adventure itself? Is it really worth £9.95? Seems a bit steep for a game these days unless it's really hot.

Well, the first thing is that I wasn't able to make much progress in the game due to the aforementioned bug, but I have managed to gather enough info and gain some first impressions that should give you something to go on – I'll print a follow-up review next month.

Interceptor's previous games have had a couple of major disadvantages and one big asset: lack of text, too easy, and brilliant graphics respectively. *After Shock*, you'll be pleased to hear, has managed to a certain degree to correct the two failings and retain the pretty pics.

First, the location descriptions. These are considerably longer than earlier Interceptor offerings and give a good atmosphere to a game in which you must traverse a ruined city after an earthquake and fix a nuclear reactor before it blasts off into space with most of the surrounding countryside.

The only thing I felt was that the longer descriptions tempt you to be more ambitious in your commands, but in fact the vocabulary, though larger than previous titles, still isn't quite as good as the descriptions might suggest. A long description of a lift, for instance, might tempt you to examine the various parts mentioned, only to get 'Try something else' or an equivalent rejection. *After Shock* doesn't tell you which word it's having difficulty with, which can make certain puzzles more difficult than they might otherwise need to be.



Which leads onto the question of difficulty. A couple of earlier Interceptor titles – *Forest at the World's End* in particular – the Cowled Crusader found far too easy. Interceptor claim that *After Shock* is far more difficult but until I've had a chance to get further into an unbugged version of the game I can't comment. First impressions are that the game is a little more devious than Interceptor's earlier releases, which is of course good news.

After Shock was written by the same author as *Jewels of Babylon* and *Heroes of Karn*. The storyline looks good, and the pictures (some of which boast animated bits, which are quite striking) are every bit as good as we've come to expect from this company. Unfortunately there are only 16 of them, but I suppose you can't have everything.

My feeling is that with only around 120 locations and a rather antiquated parser this game is very slightly overpriced at £9.95. But stay tuned for next month's follow-up review for the final verdict.





Rebel Planet

Adventure Soft or U.S. Gold, £9.95 cass, £14.95 disk, keys only

Adventure Soft is very lively concern near Birmingham masterminded by Mike Woodroffe of the old Adventure International software house. Mike is, however, anxious to dispel any associations with previous releases but even so I feel it's worth mentioning the connection because AI was nothing if not prolific in its output (in its day) and I have high hopes of this new company.

Adventure Soft has the game rights to Isaac Asimov's range of books, and the company also puts out games based on the *Fighting Fantasy* series as devised by Steve Jackson and Ian Livingston. 'Tis from this latter stable that *Rebel Planet* emerges.

The game was written by Stefan Ufnowski and Roger Taylor of Adventure Soft and features some very attractive graphics. The screen layout is in some ways similar to earlier Adventure International titles: a horizontal split display with a neat graphics window and a scrolling text area below. There the comparisons end, however, since the vocabulary is quite a bit larger than earlier AI releases – about 400 words – and the parser handles some more complex inputs – GO WEST AND EAST THEN OPEN THE DOOR for example.

The graphics are very attractive and include some animated sequences. As you begin the game on board the merchant ship Caydia you will see the stars shooting past the command module window, while at other points of the game various monsters or objects will flicker into life while you wonder what to type in next. The animation isn't exactly stunning, but it undoubtedly adds something to the overall feel of the game.

The plot in *Rebel Planet* involves your finding your way to a 'queen computer' which is controlling the Arcadian Empire troops who are invading the galaxy and threatening civilisation as we imagine it. The biggest problem involves liaising with your ship's pre-programmed flight path: just occasionally you'll find yourself stranded on a planet as the Caydia happily jets off to another destination. You can, however, delay take-off in a dire emergency, but this feature can be used only once in a game.

I enjoyed playing *Rebel Planet*. It's not the most astonishingly innovative game around, but the puzzles are logical and there's enough here to keep you going for a few days. I liked the idea of having to contact other spies for information, and the spaceship schedules caused additional challenging problems. However Adventure Soft's policy is to stick to sure-fire commercial successes, and to some extent I believe that the company's adventure system (which saves time and therefore money) is slightly lacking in inspiration: 400 words isn't a very large vocabulary by today's standards and there are no RAMSAVE or OOPS options, for example, though I hear that these are to be introduced in later titles.

Watch out for reviews of Adventure Soft's latest titles in the next issue. In the meantime you could do worse than crash the 'queen computer' in *Rebel Planet*.



WIZARD

Adventure contact

Pat Winstanley of *Adventure Probe* magazine – which I mentioned a while back – has now written to ask me if I would mention Adventure Contact:

'Adventure Contact is intended to help novice writers to understand the intricacies of utilities such as GAC *and* The Quill *and at the same time provide a source of play-testers and so on for more experienced writers who have completed games. The magazine also aims to provide information and help for those writers who wish to market their own games, by acting as a source of information on suppliers and markets for instance.'*

Sounds like a good idea to me. Pat's address, if you're interested, is 13 Hollington Way, Wigan, WN3 6LS.

Such rudeness

'Congratulations with your Adventure Corner in Amstrad Action,*' writes* Jaehee Lee of the Netherlands. Then he spoils it all by saying, *'I still think that the adventure column in* Computer and Video Games *is the best, but you are a very good number two!'*

This is too much for the Pilg to bear. The Cowled Crusader simply will not accept second place. As it happens, I am pleased to announce that from year's end the Pilg's pages will present a major reorganisation and facelift, including maps, more tips, more games reviewed, and more of the inimitable, unbeatable me.

And as for you, Jaehee ➥ The Balrog is on its way – please speak nicely to it, offer it a knife and fork, and then sit on a large plate.

Attaining impossible

'Can you advise me about the best way to market a game without getting ripped off and how to copyright it?' asks David Barr of Antrim.

Hmmmm...This question is often asked, David – and particularly now we have adventure-writing utilities such as *GAC* and *The Quill*. There are two points to be made. First, the law surrounding copyright of computer programs is still in a certain amount of disarray. You can, however, protect yourself to a certain degree by:

▷ ensuring that your name, the date, and a copyright message is encoded into the program in



Red-hot charts!

ASCII at a fixed address and is also prominent on all packaging
▷ lodging a copy of the program (with labelling as above) with your bank or a similar institution so that in the event of a claim you can prove your prior possession of the game.

As for marketing the game, I think it is fair to say that there are virtually no successful software houses in the UK who will deliberately rip off a programmer who sends in a game for evaluation. There are also virtually no successful programmers who do not feel that they have been either underpaid or otherwise abused by one software house or another.

It is unwise to attempt to market a game yourself unless you feel that you have no alternative.

Level 9 lash-out

And now a rather odd letter from no less a gent than Pete Austin of Level 9 fame. It runneth as follows:

'The Graphic Adventure Creator *from Incentive Software seems quite a good product and has been getting some clever marketing of late. Indeed, some people may even have gained the impression that it is equivalent to Level 9's adventure system ...'*

Hmmmm... Have they really? I honestly find this difficult to believe – Level 9's system is not available for public use so the only real comparison that could be made would be between games produced by the two different systems, rather than the systems themselves. However, let us continue...

'We compared Level 9's system with the newest version of Incentive's GAC, *on the Commodore 64:*

▷ Adventure Facilities. The GAC *seems to omit many features which we take for granted nowadays: eg. RAM SAVE, OOPS, multi-tasking and arrays.*

▷ Memory left for adventure. Level 9 has spent months carefully optimising the machine-code kernel of our advnture system so it wastes the minimum of space. Where the GAC *reports only 23K free for the adventure, Level 9's system provides 39K. That's 70% more.*

▷ Graphics. The GAC*'s pictures look very pretty, until you realise that the six pictures in its demo game use over 11K. That's more than all 200 pictures in a typical Level 9 game put together. Or to put it another way, just six pictures use half the total memory available for the entire* GAC *adventure!*

▷ Program compression. Level 9 has spent years optimising compression techniques and, taking Price of Magik *as an example, 160K if adventure logic source compiles down to just 12K.'*

Well, the letter continues, but I don't think we need say any more. Pete has made his point, but for the life of me I can't see why he bothered! It would be different if his system were up on the shop shelf beside *GAC*, but it isn't. And in the meantime I still reckon that *GAC* tops the league of adventure generators and I still reckon that many of the readers' games sent to me written using the utility are of excellent quality. Perhaps, dare I suggest, it's the quality of the competition rather than the utilities used to produce it that's got Level 9 worried?

One interesting point to emerge from Pete's letter, however, is a brief sample of some Level 9 A-Code – the stuff they use to write their games. In this short section, we encounter a goblin who won't let you pass unless paid with a bar of gold:

```
.MOVEPASTGOBLIN
    IF DEST<>PASTGOBLIN THEN MOVENEXT
    IF BRIBED=TRUE THEN MOVENEXT
    MESSAGE OYPAYFIRST
    RETURN
.MOVENEXT

.GIVEGOLD
    IF CREATURE<>GOBLIN THEN GIVENEXT
    IF OBJECT=GOLDBAR THEN GOBLINACCEPTS
    MESSAGE DONTWANTTHAT
    RETURN
.GOBLINACCEPTS
    MESSAGE THANKYOU
    GOBLINBRIBED=TRUE
.GIVENEXT
```

This month's charts were really interesting for two reasons. First, there were many more votes than ever before, and readers nominated a wider range of games. Global's *Old Scores* got several mentions, as did *Bored of the Rings* and although neither actually made it into the Top Ten it was good to seem them being put forward along with games like *Robin of Sherlock, Subsunk*, and a host of other titles. All this goes to show that adventurers are broadening their tastes and adding to their collections as the Amstrad adventuring market comes of age.

Here goes then with this month's Top Ten, and this month's Lucky Pilg whose entry was picked out of the Cowled Crusader's folded cape: John Clark of Tyne and Wear, who receives a free copy of *The Hobbit* from Melbourne House.

Don't forget to vote early for next issue. Help make this chart an important aid to all other adventurers who may be wondering what to spend their hard-earned pennies on. Your opinions count, and you could walk away with some free software into the bargain!

Adventure Top Ten...

1 **Red Moon** (Level 9)
2 **Never Ending Story** (Ocean)
3 **The Hobbit** (Melbourne House)
4 **Lord of the Rings** (Melbourne House)
5 **Heroes of Karn** (Interceptor)
6 **Warlord** (Interceptor)
7 **Hitchikers Guide** (Infocom)
8 **Worm in Paradise** (Level 9)
9 **Heavy on the Magick** (Gargoyle)
10 **Emerald Isle** (Level 9)

To The Pilgrim
Amstrad Action
The Old Barn
Somerton, Somerset
TA11 5AH

My favourite three adventures are:

Game	Company
1	
2	
3	

The reasons for my first choice above are:

The free game I would like if I'm a lucky Pilg is:

My name:

My address (BLOCK CAPITALS ONLY PLEASE):

LORDS AND LADIES OF ADVENTURE

This month has seen a bumper crop of applicants for immortality in the Lords and Ladies column. Unfortunately we haven't room to fit you all in this time, but names of the Chosen Ones who can't be included here will be carried forward to next month's issue.

The Pilg gets many requests for help, but as I often point out I'm afraid I simply haven't got the time to answer them all – or even in many cases to acknowledge them. So please make good use of the Lords and Ladies, who have put in many hours of keyboard-tapping and Balrog-bashing so that they can give you the benefit of their experience.

If you should have any cause for complaint about anyone in the Lords and Ladies column, let me know. There have been terrible tales of Lords who have boasted of their accomplishments but *have not actually finished the games!* This terrible crime will not go unpunished if discovered!

And make sure you don't give the Lords and Ladies themselves any cause for complaint. Always enclose a self-addressed stamped envelope. Never phone them after 10 at night. Thank you!

Mindshadow, Never-Ending Story, Espionage Island, The Hobbit, Price of Magik, Mordons Quest, Return to Eden, Bored of the Rings
Rod Dunlop, 43 Sutherland Avenue, Pollokshields, Glasgow, G41 4ET

Heroes of Karn, Warlord, Never-Ending Story, Sub-Sunk, Sea-Base Delta, Fantasia Diamond
Justin Grimley, 5 Folly Lane, Armagh, N Ireland, BT60 1AS

Colossal Adventure, Forest at the World's End, Message from Andromeda, Red Moon
Alex Aird, 139 Bromford Road, Hodge Hill, Birmingham, B36 8HR

Subsunk, Heroes of Karn
Richard Shield, 126 Carlinghow Lane, Batley, West Yorks, WF17 8DW (Tel: (0924) 47 4139)

Return to Eden, Lords of Midnight, The Hobbit, Marsport, Spellbound, Sub-Sunk
Paul Stagg, 259 Barrowby Road, Grantham, Lincs, NG31 8NR

Colossal Adventure, Adventure Quest, Dungeon Adventure, Lords of Time, Emerald Isle, Return to Eden, Snowball, Worm in Paradise, Red Moon, Price of Magik, Bored of the Rings, Seas of Blood, Souls of Darkon, Mordons Quest, Robin of Sherwood, Never-Ending Story, Lords of Midnight, Runestone, Espionage Island, Inca Curse, Ship of Doom, Planet of Death, Message from Andromeda, Jewels of Babylon, Heroes of Karn, Forest at World's End, Warlord, The Hobbit
Peter Brown, 57 Ropers Avenue, Chingford, London, E4 9EG

Forest at the World's End, Message from Andromeda, Hobbit
Thomas McMurchie, 3 McDonald Street, Dundee, DD3 7BD

*Spellbound, Jewels of Babylon, Subsunk, Seabase Delta, Heavy on the Magik, Swords and Sorcery***Hedd Jones, 57 Riversdale, Llandaf North, Cardiff, S Wales**

Gremlins, Hobbit, Never-Ending Story
Sam Coatham, Shallon Cottage, Staneley, Knaresborough, N Yorks

Forest at the World's End, Jewels of Babylon, Message from Andromeda, Heroes of Karn, Bored of the Rings, Snowball, Gems of Stradus
Iain Purdie, 9 Glassford Road, Strathaven, Lanarkshire, Scotland, ML10 6LL

Heroes of Karn, Empire of Karn, Crystals of Carus, Jewels of Babulon, Subsunk, Seabase Delta, Worm in Paradise, Voodoo Castle, Terrormolinos, Mordons Quest, Neverending Story, Mindshadow, Urban Upstart, Robin of Sherwood, Hampstead, Wizard of Akyrz, Hobbit, Time Machine, Circus, Arrow of Death Part II, Emerald Isle, Lords of Time, Gremlins, Sorceror of Claymorgue Castle, Red Moon, Ten Little Indians, Perseus and Andromeda, Zzzzz, Feasibility Experiment, Valkyrie 17, Bored of the Rings, Pirate Adventure, Very Big Cave Adventure, Valhalla, Golden Baton, Ring of Power, Adventureland, Colossal Adventure, Quest for the Holy Grail, The Incredible Hulk, Price of Magic, Return to Eden, Snowball, The Pilgrim, The Snow Queen, Espionage Island, Inca Curse, Kentilla, The Helm, Lord of the Rings, Ship of Doom, Zork I, Spiderman, Warlord, Forest at the World's End, Planet of Death
John R Barnsley, Adventurescue, 32 Merrivale Road, Rising Brook, Stafford, Staffs, ST17 9EB

All Interceptor games
Peter Inglis, Ar-Dachaidh, Ardelve, Kyle, Ross-shire, IV40 8EH

Warlord, Red Moon, Heroes of Karn, Lords of Time, Message from Andromeda, Mindshadow, Forest at World's End, Subsunk
Simon Marshall, 23 Springfield Way, Stockton Lane, York, YO3 0HN

Seabase Delta, Terrormolinos
The Mouse and Lano Helpline, 6 Penrhyn Avenue, Litherland, Liverpool, L21 6ND

Mordons Quest, Jewels of Babylon, Heroes of Karn, Souls of Darkon, Message from Andromeda, Forest at World's End, Smugglers Cove, Red Moon, Warlord, Emerald Isle
Mrs Shirley Wall, 38 Glebelands, Westfield, Radstock, Bath, Avon, BA3 3SU

Forest at World's End, Jewels of Babylon, Lord of the Rings Part I
James McMahon, 12 Sidehead Holdings, Stonehouse, Lanarkshire, ML9 3PG

CLUE SNIFFING

Following my request for some tips on some less-publicised games, I received a tidy little batch of clues from Pat Winstanley of Adventure Contact. So here goes with another selection of head-spinning tips for those in sticky situations.

Microman
Stick to pushing by the window
Climb out of the deep freeze
Check the Amstrad manual for colour coding

Redhawk
Lesley wants something pretty ...
Don't drop the vase – take it to a museum

Castle of Skull Lord
Chop tree for something nautical
Wake the bear, but be ready to feed it
Dig snow to find another way through
Clobber the dog with a bone
The man needs some first-aid – a bandage

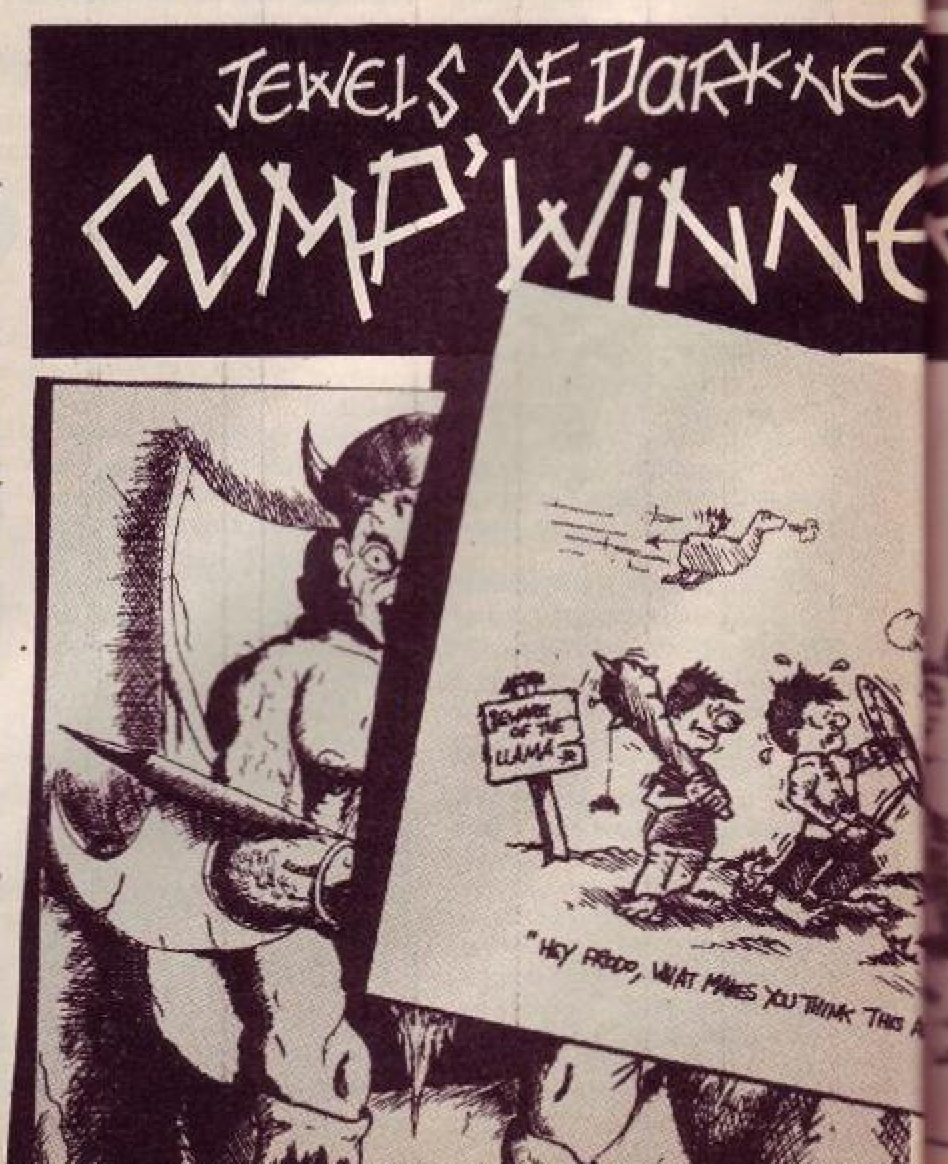
Island of Riddles
Vault river to get across – use a branch
Hit the stone to light the lamp

Al-Strad
Examine the tree, open the safe
The river is alcoholic ... and so is fuel!

Castle Blackstar (thanks to Michael Todd)
Going 'troll'ing on the fissure? Try throwing a coin just to be sure
Lost in darkness? Look down the well
To get past the invisible man, throw some flour

Return to Eden (thanks to Paul Stagg)
Parrot thieving objects? NEWS from the maze!
Animals attacking you? Drop the radsuit ...
Keep your eyes open in the Theme Park

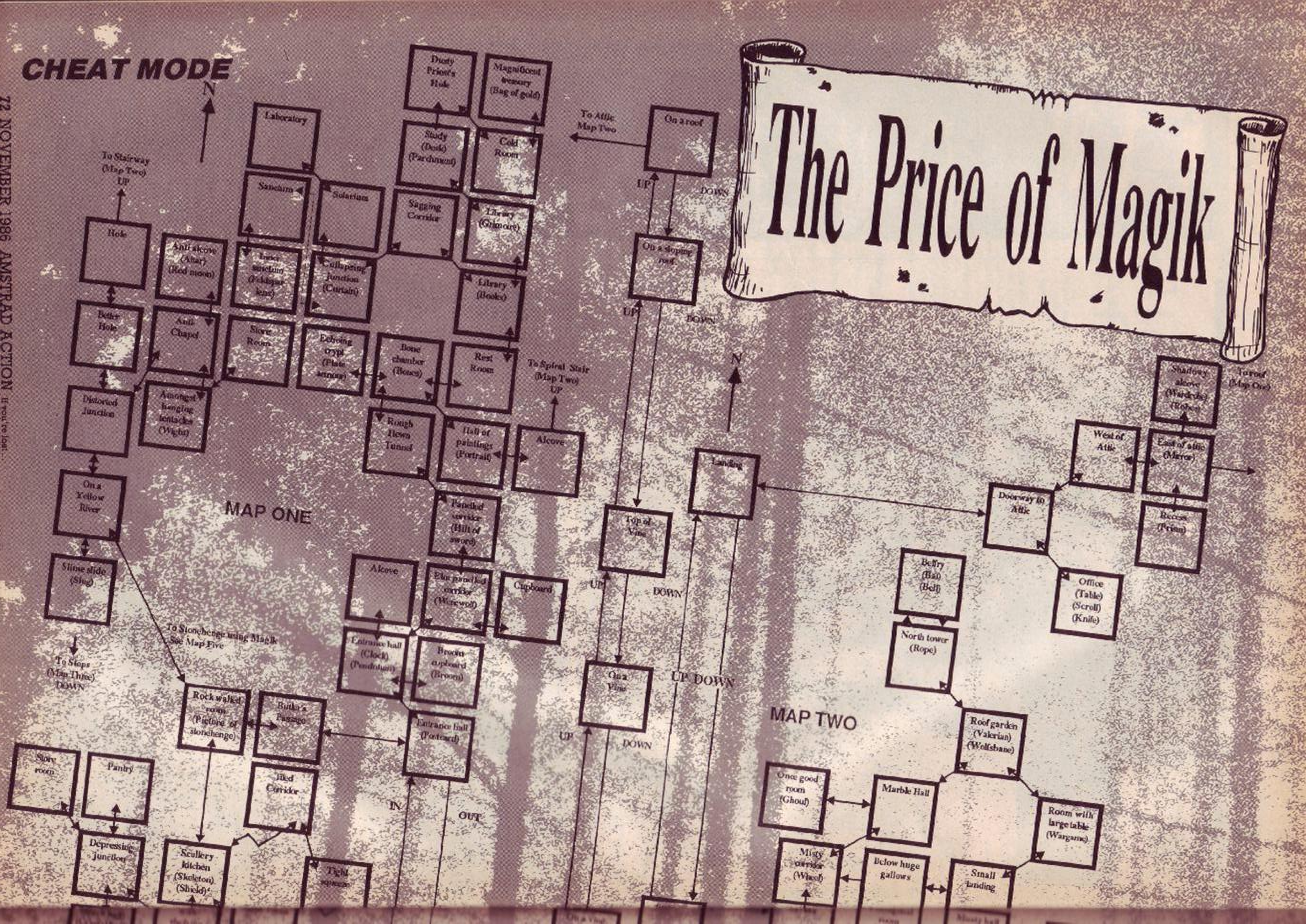
JEWELS OF DARKNES[S] COMP WINNE[RS]

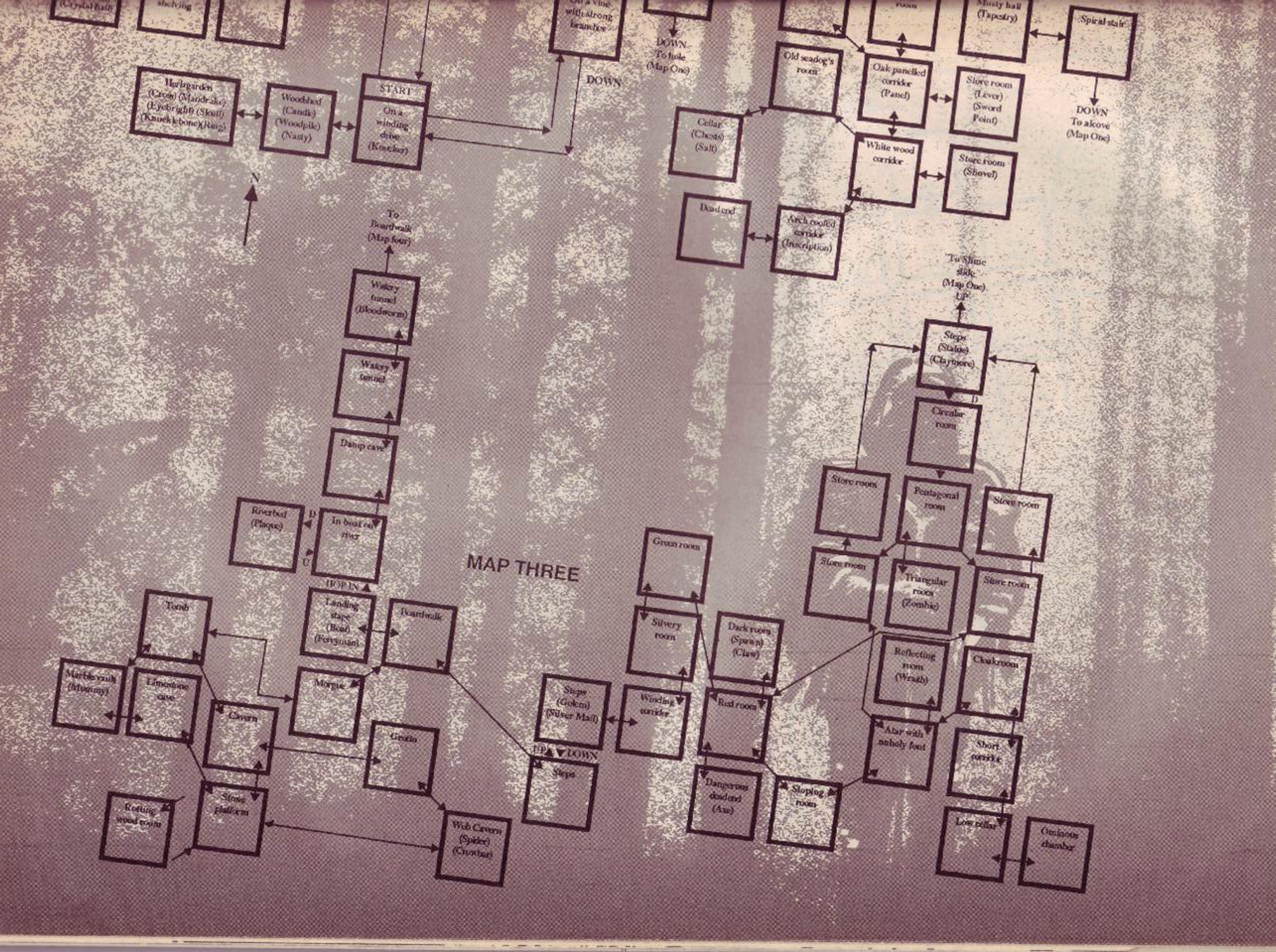


OVERALL WINNER
Malcolm Arnold, Leeds:

A Garland, London NW3; Ian McLaren, Glasgow; Mr P Wilson, Fife; P Newman, Weston-Super-Mare; S Sarkar, London E11; Chris Douglas, Halifax; John M'Indoe, Northampton; Timothy Hanitzsch, Salop; Mark Nixon, Birmingham:

The Price of Magik




MAP THREE
Spiral stair
DOWN To alcove (Map One)
Misty hall (Tapestry)
Store room (Lever) (Sword Point)
Store room (Shovel)
Oak panelled corridor (Panel)
White wood corridor
Old seadog's room
Arch roofed corridor (Inscription)
Cellar (Chests) (Salt)
Deadend
DOWN To hole (Map One)
On a vine with strong branches
DOWN
START
On a winding drive (Knocker)
Woodshed (Candle) (Woodpile) (Nasty)
Herbgarden (Cross) (Mandrake) (Eyebright) (Skull) (Knucklebone) (Ring)
shelving
(Crystal ball)
N
To Slime slide (Map One) UP
Steps (Statue) (Claymore)
D
Circular room
Pentagonal room
Store room
Store room
Store room
Store room
Triangular room (Zombie)
Cloakroom
Short corridor
Low cellar
Ominous chamber
Reflecting room (Wraith)
Altar with unholy font
Sloping room
Dark room (Spawn) (Claw)
Red room
Dangerous deadend (Axe)
Green room
Silvery room
Winding corridor
Steps (Golem) (Silver Mail)
UP
DOWN
Steps
Web Cavern (Spider) (Crowbar)
Boardwalk
Grotto
To Boardwalk (Map four)
Watery tunnel (Bloodworm)
Watery tunnel
Damp cave
In boat on river
HOP IN
Landing stage (Boat) (Ferryman)
Morgue
Riverbed (Plaques)
D
U
Cavern
Stone platform
Tomb
Limestone cave
Rotting wood room
Marble vault (Mummy)

The Price of Magik

MAP FOUR

Arched stone corridor
Jet black room
Arched stone corridor
Stone room (Bolted door)
Arched stone corridor
Jade room
Arched stone corridor
Statue lined room
Entrance hall
IN
OUT
Hall of swirling mists (Dead idol)
Cylindrical chamber
Great stone room
Ice room
FINISH Tomb of myglor (Myglor)
Moon room (Gargoyle) (Moonbeast)
Steps
Portico (Ants)
Steps
Steps
Steps
Steps
Grassy plain
Grassy plain
Just south of glowing gateway
Laboratory
Hall of statues (Cherub) (Trumpet)
Spherical junction
Dry gallery
Glass cave
Short stone corridor
Store room
Glass room

STONEHENGE

N

To rock walled room (Map one)
Standing stone
Pillar
Pillar
Standing stone
Pillar
Standing stone
Carved pedestal (Blue box)
Standing stone
Pillar
Standing stone
Standing stone
Standing stone
Pillar

MAP FIVE

Grassy plain
Volcanic rock outcrop
Grassy plain
Pillar

 if you can find him ...



(Talisman)
(Weight)
(See map five)
Boardwalk
Misty room
To watery tunnel
(Map three)
Arrive here when you "Rub Talisman"
Stone archway
"Rub Talisman"
To return to previous location
OTHER PLAIN
Lake shore (Magik lake)
Steps
Steps
Steps
Spherical rock bubble (Riddle)
Spherical rock bubble
Spherical rock bubble
Arrive here
MISTS OF TIME
MISTS OF TIME "DOWN" To Stone archway
MISTS OF TIME "DOWN" To Grassy plain
MISTS OF TIME "DOWN" To Hall of statues
MISTS OF TIME "DOWN" To Winding corridor
MISTS OF TIME "DOWN" To Ominous chamber
MISTS OF TIME "DOWN" To Anti-alcove
MISTS OF TIME "DOWN" To Morgue
MISTS OF TIME (No Exit down)
MISTS OF TIME "DOWN" To North tower
MISTS OF TIME "DOWN" To Entrance hall
MISTS OF TIME "DOWN" To Stone archway
MISTS OF TIME "DOWN" To Winding driveway
MISTS OF TIME "DOWN" To Strange rock formation
MISTS OF TIME "DOWN" To Standing stone
MISTS OF TIME "DOWN" To Cold store
MISTS OF TIME "DOWN" To Triangular room
MISTS OF TIME "DOWN" To Riverbed
MISTS OF TIME "DOWN" To Misty room
MISTS OF TIME "DOWN" To The temple
MISTS OF TIME "DOWN" To Herb Garden
MISTS OF TIME "DOWN" To Pantry
MISTS OF TIME "DOWN" To Grotto
MISTS OF TIME "DOWN" To Dry gallery
MISTS OF TIME "DOWN" To Portico
MISTS OF TIME "DOWN" To Store room
MAP SIX
MISTS OF TIME
Cast "Zen" to arrive here from anywhere in the game provided you are not in combat at the time

CHEATMODE

Bob Wade checks out your tips, pokes and game-busting ploys. The best ones could win a entire issue's *AA* Raves! So why not send YOUR latest gem to: Cheat Mode, *Amstrad Action*, Somerton, Somerset, TA11 5AH.

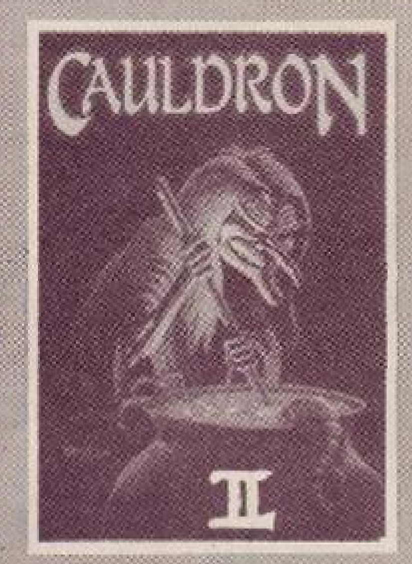
No I'm Not gonna look.

Allan Trotman from Chiseldon has everything you want to know about this bewitching game. With his tips and our map from issue 12 you should be able to crack the game.

The best place to start is in the throne room. This is because it is in the middle of the castle and gives easy access to three of the collectable items, which you should get in this order:

Shield – Go into the roof above the shield and drop through the hole onto it, bouncing straight back into the room so that the gargoyle doesn't tip you off into thin air. Be careful not to land on the gargoyle's head when you come through or you're in big trouble.

Crown – Bounce onto the second step then bounce again and you will get the crown. Go left two screens and bounce at full onto the gargoyle and back again. Then bounce back onto the gargoyle and hold the joystick left until the bounce has calmed down, then bounce right.



Goblet – Bounce into the roof and go down and down again. Bounce left, dropping from a window and then bounce right. Go through the skeleton and bounce high and right until you can get the goblet. Bounce back immediately and retrace backwards off the ledge to the left.

Axe – Keep going left and pick up the axe. Keep going left until you drop and then jump out of the window onto the roof.

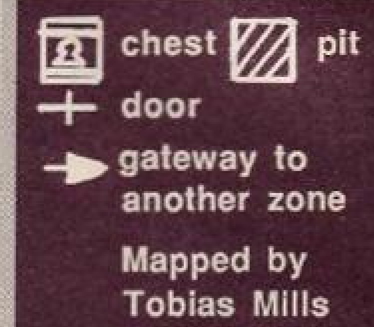
Scissors – Bounce left and out of the far left roof hole (avoiding gargoyle's head), collecting the magic and falling to pick up the scissors.

Now the hard bit. Go through the castle to the roof above where the shield was and go right. Go up the platforms to the top of the roof. Go right to where the spider is and with one big jump get onto the platform above him, and out of the top right. Up the next screen to enter the witch's bedroom.

The witch's magic won't move, allowing you to get a lock of her hair, but it still kills if touched. Now just get to the top of the building to get the spellbook and then down to the cauldron.



Rhys Jones from Peterborough has some thorough tips to help you get through the PSS game, including a poke for creating a super-character. There's also a map from Tobias Mills of Acomb showing all four of the game zones.



1. Before trying to name your character press Capslock, as only capital letters are allowed.
2. The masters possess the following skills and results when you study with them.

ELITE

A great tip for all owners of the Firebird game on disk. It comes from J McGuiness of Stocksfield and does some very weird things. Here's what you do:

1. Start game and go to the load/save game screen.
2. Select the option 'load new commander'.
3. Input commander's name as "Elite" and press Enter.
4. The message 'disk loading error' will appear.
5. Press '4' to exit the screen.
6. Press Space to begin game and you are in for a big surprise.

Apart from giving you all sorts of things you don't normally have, this also seems to introduce some interesting bugs into the game. So play around with it and see what happens.

Turbo Esprit

Some quickie tips from Wayne Harrigan of Bexleyheath on drug-ring busting.

1. Avoid chasing the red cars (armoured cars) near the end of the game, because they lead you on a little mystery tour through all the back streets and barge you into signs, people and lampposts.
2. Never shoot anything. You get many more points for ramming into the back of a car – up to 2,000 sometimes.
3. Never choose different towns when you start playing. After using the same town a few times you become used to it and eventually know it by heart.
4. Always go fast, only slowing for turnoffs.

Poke n

This is the section where w explain how to input the major ity of *Cheat Mode* pokes. Ther are two different methods – th instructions for each poke te you which one to use. If yo have a 664 or 6128, you'll hav to type |**tape** before usin either.

Method 1: Make sure th you've rewound the game tap to the beginning. Now type i the poke listing. Then type **RU** and press the 'Enter' key. (Don use the key marked 'CTRL' o 'CONTROL', that will stop th poke from working.) Press th PLAY key on the cassette dec and hit any key on the mai keyboard – the space bar wi do nicely. The tape should no start to play through in th normal way.

Method 2: For this metho you have to skip the first bit c the game program. To do tha start by rewinding the gam

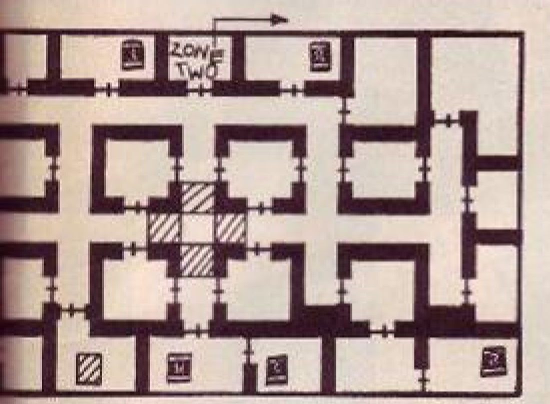
Yama	Secret of death	Use once only
Bog	Way of the sword	1 to skill with weapon
Scrag	Way of the spear	1 to skill with weapon
Grol	Way of the staff	1 to skill with weapon
Iva Veston	Secret of strength	2 to strength
Villa	Way of the thief	1 to thieving skills
Jack	Agility	2 to agility
Grieves	Secret of etiquette	Use once only
Iscarth	Way of the fist	1 to skill without weapon
Verna	Secret of taking blows	1 to ability to take blows
Merlock	Way of the magician	1 to magic skills
Hubris	Improve instincts	1 to thieving skills

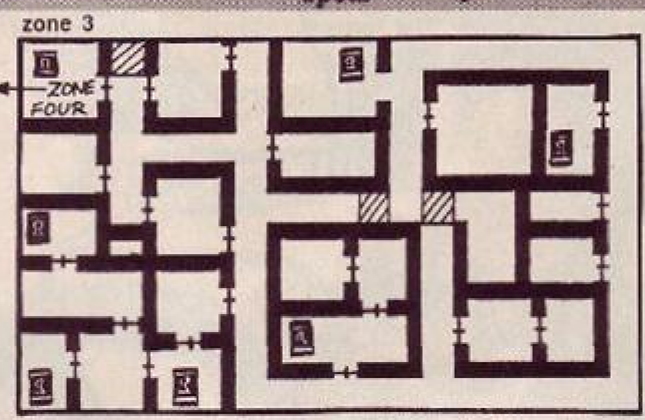
3. In the armoury always buy the cheapest things first. You can buy anything as long as you have at least one dragon's tooth. In other words even if you only have one tooth left you can still buy the armour.

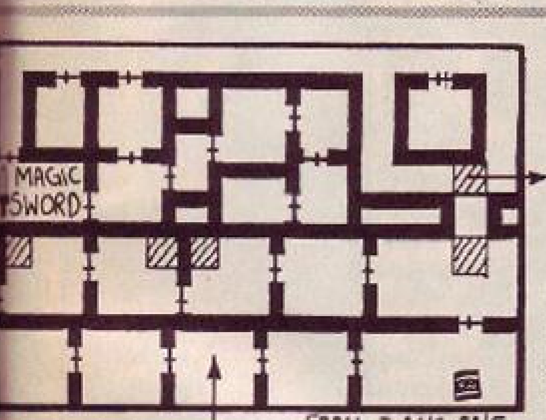
Staff	16	Helmet	7
Shield	15	Gold	20
Armour	40	Wine	5
Sword	20	Pie	8
Spear	9		

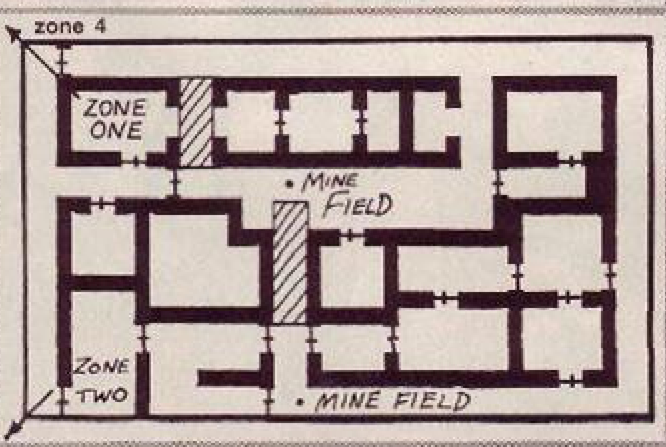
4. To see if an item is magical, hold it and then use the crown of magic detection.
5. There are lots of different potions but if you ever get poisoned use the peppermint potion as a cure.
6. There are two ways to deal with pits: you can go around them or jump them. As agility goes up you can jump further. When in the 200s you can leap whole corridors.
7. As thieving skill goes up you can disarm and pick locks more easily. Smashing chests decreases your thieving skills but increases your strength.
8. The magic numbers have the following meanings, reading top to bottom, the left column first: don't know, fighting skill with weapon, thieving skill, magic skill, unarmed-combat skill, strength, don't know, don't know, ability to take blows, agility.

To use the poke you first need to save your character from the game then type in the poke and run it. This will prompt you to load the saved character. You can then change his name if required (just hit Enter if you don't want to change). You'll then be prompted to save the character back onto tape. This new character can then be used as any other saved game to load back into *Swords and Sorcery*.










```
SWORDS AND SORCERY

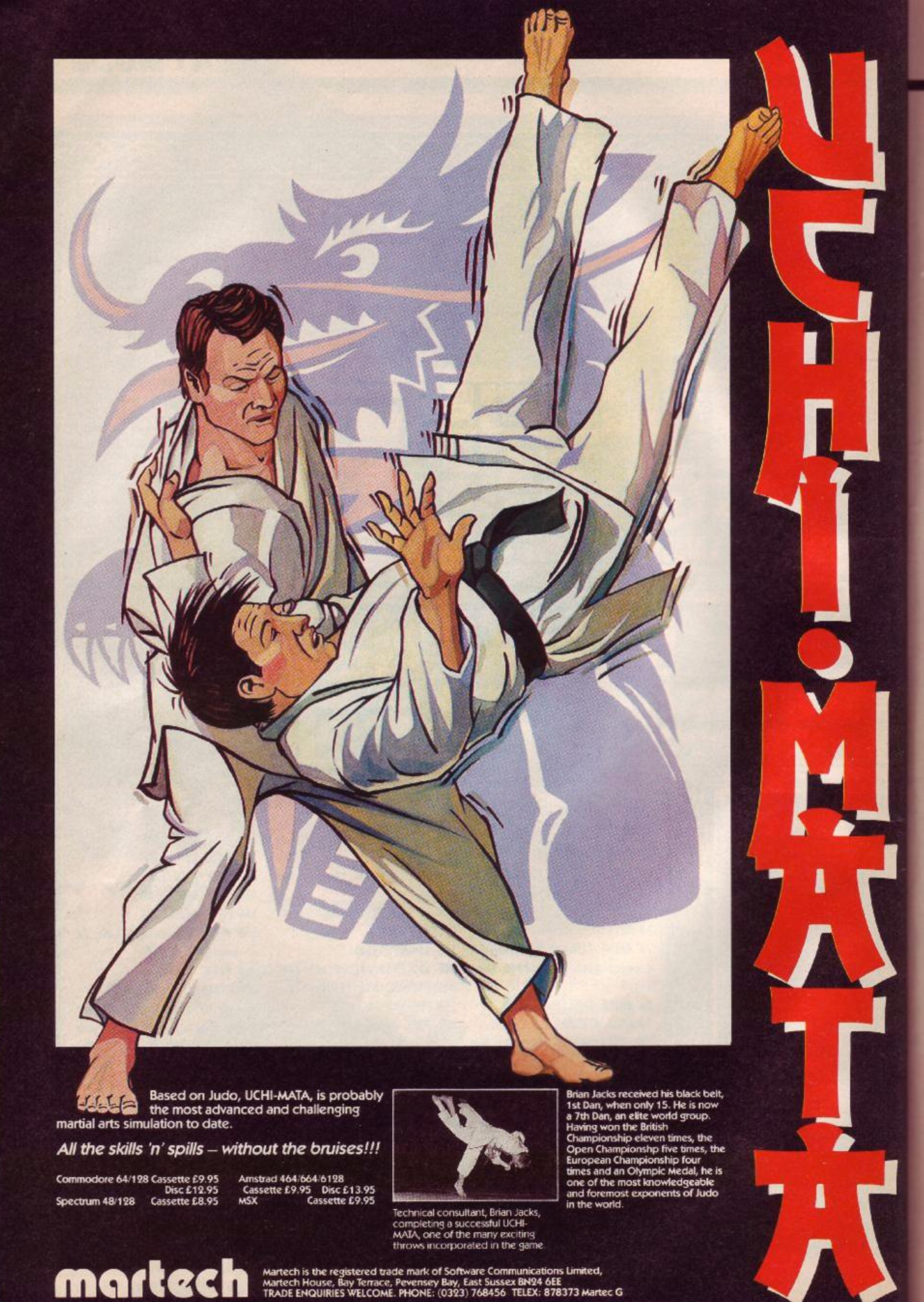
10 MODE 2
20 MEMORY HIMEM-13
30 FOR t=HIMEM+1 TO HIMEM+12
40 READ a
50 POKE t,a
60 NEXT
70 PRINT "Insert tape to loa
d saved game then press any
key."
80 WHILE INKEY$="":WEND
90 CALL HIMEM+1
100 PRINT:PRINT "Current nam
e is ";
110 FOR t=39820 TO 39835
120 PRINT CHR$(PEEK(t) AND &
7F);
130 IF PEEK(t)>&80 THEN t=39
835
140 NEXT
150 PRINT
160 PRINT
170 INPUT "Input the new nam
e ";a$
180 IF LEN(a$)>16 OR LEN(a$)
<1 THEN 200
190 a$=UPPER$(a$)
200 a$=LEFT$(a$,LEN(a$)-1)+C
HR$(&80+ASC(RIGHT$(a$,1)))
210 FOR t=1 TO LEN(a$)
220 POKE 39819+t,ASC(MID$(a$
,t,1))
230 NEXT
240 PRINT
250 POKE 39785,200
260 POKE 39786,200
270 POKE 39797,200
280 POKE 39800,200
290 POKE 39784,200
300 POKE 39791,200
310 POKE 39798,200
320 POKE 39367,200
330 POKE 39814,200
340 POKE 39796,200
350 PRINT"New values have be
en poked."
360 PRINT
370 POKE HIMEM+10,158
380 PRINT"Insert tape to sav
e new character on, then pre
ss any key."
390 WHILE INKEY$="":WEND
400 CALL HIMEM+1
410 END
420 DATA 33,171,138,17,100,1
8,62,22,205,161,188,201
```

ethods

e to the beginning. Now type the listing. Then type **CAT**, d press the 'Enter' key. Start e tape by pressing PLAY and ting a key, and then watch the reen.

After a little while you'll get e message "Found METHING block 1". It doesn't atter what the SOMETHING actually is – this will vary from one me to another. If the instrucons with the poke just tell you skip the first block you should op the tape here. If the instrucons tell you to skip several ings, stop the tape when the ound' message comes up for e last thing you're trying to ip.

Once you've stopped the pe press the ESC key, type UN, and press the 'Enter' key. ow press PLAY on the tape ck, and hit a key on the keyard to start the tape running.


UCHI-MATA
Based on Judo, UCHI-MATA, is probably the most advanced and challenging martial arts simulation to date.
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S·T·O·R·M

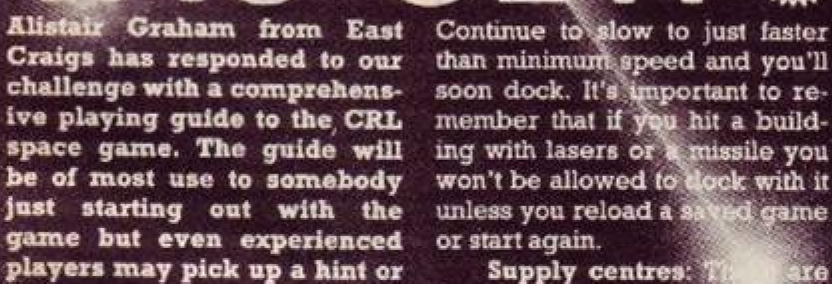
There was a good response to the challenge to produce joystick control on the Mastertronic dual-player game. The best of the bunch were by Phil Howard of Mapperley and Timothy Lomas of Sanderstead. Phil's allows you directional joystick control in a one-player game and activates the armour that didn't work in the original game. Timothy's allows single- or dual-joystick control, although the second joystick may not work exactly as planned with all dual-joystick connectors. If the second player would prefer the original keys or you don't have a second joystick then just delete lines 110-140 before using the poke. Both pokes are entered using Method 1. Phil's is printed first.

STORM ONE

```
10 DATA 00,3a,a5,57,fe,05,20,04,cd,03,0d
20 DATA c9,3a,50,00,b7,c4,5a,0d,af,32,50
30 DATA 00,21,1e,0d,e5,36,c9,cd,0c,0d,e1
40 DATA 36,3a,cd,24,bb,f5,cb,67,c4,e6,0d
50 DATA f1,47,3e,00,cb,40,20,10,cb,58,20
60 DATA 0b,cb,48,20,06,cb,50,20,01,c9,3c
70 DATA 3c,3c,eb,03,32,41,57,3c,32,50,00
80 DATA c9,06,00,11,70,01,cd,77,bc,21,70
90 DATA 01,cd,83,bc,cd,7a,bc,21,51,00,22
100 DATA dc,0c,21,be,00,22,aa,1c,c3,70,01
110 DATA cd,04,20,cd,05,22,cd,60,1c,c9
120 y=0:MEMORY &3000
130 FOR x=&50 TO &C7:READ a$
140 a=VAL("&"+a$):POKE x,a
150 y=y+a:NEXT
160 IF y()&2C53 THEN PRINT "Data error!":END
170 LOAD"des",&35C0
180 LOAD"!",&7D74:LOAD"!",&5500
190 CALL &9E
```

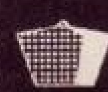
STORM TWO

```
10 DATA 21,8c,b8,11,40,00,3e,2c
20 DATA cd,a1,bc,2a,6f,aa,ed,5b
30 DATA 9f,b8,3e,16,cd,a1,bc,2a
40 DATA 6f,aa,01,00,08,09,22,6f
50 DATA aa,3a,9d,b8,fe,ff,20,d8
60 DATA 21,fe,0f,3e,2f,77,01,04
70 DATA 00,09,3e,4c,77,01,04,00
80 DATA 09,3e,48,77,01,04,00,09
90 DATA 3e,4a,77,01,04,00,09,3e
100 DATA 4b,77,01,04,00,09,3e,15,77
110 DATA 21,57,10,3e,34,77,01
120 DATA 04,00,09,3e,30,77,01,04
130 DATA 00,09,3e,32,77,01,04,00
140 DATA 09,3e,33,77
150 DATA c3,70,01,end
160 MEMORY &14FF
170 FOR a%=&AA00 TO &AA6E:READ b$:IF b$="end" THEN 190
180 POKE a%,VAL("&"+b$):NEXT
190 POKE &AA6F,&70:POKE &AA70,1
200 LOAD "!des",&35C0
210 LOAD "!",&7D74
220 LOAD "!",&5500
230 CALL &AA00
```

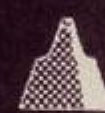


TAU CETI

THE SPECIAL EDITION







Alistair Graham from East Craigs has responded to our challenge with a comprehensive playing guide to the CRL space game. The guide will be of most use to somebody just starting out with the game but even experienced players may pick up a hint or two.

Starting up: The first thing to do is define the keys you want. Remember that the controls are not saved when you save a game, so every time you load up you must redefine the keys. It's a good idea to fly around for a bit getting used to the controls and to familiarize yourself with the display panel. The one thing to ignore here is height, which is of no importance.

The first thing to do at Reema, your starting point, is to find the library and reactor substation. You start near the town but the automatic direction finder will guide you back to the centre if you stray. The substation will contain one or more control rods and the library a timevault.

Docking: This is very simple and nowhere near as hard as in *Elite*. There are six kinds of building you can dock with: two types of reactor, two types of supply station, libraries and the lander. Head towards the building, gradually slowing. A blue rectangle should appear and start to fill the viewscreen. Continue to slow to just faster than minimum speed and you'll soon dock. It's important to remember that if you hit a building with lasers or a missile you won't be allowed to dock with it unless you reload a saved game or start again.

Supply centres: There are two types, military and civilian. All towns have one of each and once docked with you can access the Equip function to use them. A menu with six options will appear. The refuel, repair and install-flares options can be used at either centre, while the missiles and anti-missile missiles can be installed only at the military centre. The repair system will recharge the shields and repair any systems damaged in combat.

Libraries: You'll find one of these in every town, usually near both the centre and a reactor substation. They look like a civilian supply centre with a diamond on top. Once docked the command 'LI.' will take you to a menu screen. The data banks allow you access to information under many headings (experiment to see which ones), but much of it isn't very relevant.

The city map allows you to examine detailed maps of the city you are in, its outpost and the neighbouring cities. These show the positions of buildings and enemies but is not updated when they are destroyed. The main map gives information about the defence levels of different towns and their jump pads to other towns. The identification chart shows what the buildings and ships look like on screen and gives information on their defences and weapons.

Timevaults: These are found in libraries and provide useful equipment. You're told on docking whether there is one present and can access it by typing 'timevault'. Eight rectangles in a circle will appear with another rectangle in the middle. Put the cursor over the centre one and press fire. A pattern will form in the outer rectangles. Put the cursor over one rectangle, remembering where it is, and press fire. If you've chosen correctly a rectangle at the top of the screen will light up; if not the pattern will disappear and you'll have to start all over again. If you get the right rectangle the pattern will reappear and you must hit the same one as before in relation to the others.

There are six objects to be found in the vaults, each one serving a purpose. A radiation suit slows the rate at which the the radiation affects you in the main reactor. Reserve shields come into operation when normal shield strength reaches zero. Experimental missiles destroy everything in a city except jump pads and buildings you can dock with. A single jump unit allows you to jump to a city's outpost. All of these have substations but not supply centres, and they're often heavily guarded. The energy recharge unit speeds up the recharging of the shield. Durium crystals can explode when launching, destroying or damaging the ship.

Reactors: You must dock with all of these to see if they contain control rods. These come in two halves which have to be fitted together on a screen accessed by using the 'rod' command. This section is very similar to the puzzle-solving in *Impossible Mission* and you should have no problem with the controls.

In the main reactor you have to take the whole rods you have formed and drop them into the circles in the reactor core, which will light up. This has to be done quickly because of the dangerous radiation and heat levels.

Combat: This is fairly straightforward but there are some general tips. Use missiles when possible since your lasers overheat easily. Change views rather than turning the ship to get at enemies who attack you when not in sight. Destroy radar towers to stop them sending more ships after you. When fighting at night don't use infrared while shooting a moving object but put up a flare so you can target on it more easily.



Tips for the helicopter simulation come from Clifford Jolliffe of Northfleet.

The secret code for the helicopter section is WREN. At the start of the game you are flying forwards at 45 degrees. Pull down on the joystick so you fly backwards at 45 degrees. Move the stick to the right till it gets to bearing 000 degrees. Fly to the map numbered 11. Look along the white line on the detailed map and you should see a red square. Land here and get the machinegun.

Take off and go to any other red squares on the map, getting all the equipment. There are two people on this map; get Bertie. Fly at bearing 180 until you get to map 10. Collect equipment from red squares. Fly at bearing 270 to the allied camp on map 10. Land on the red rectangle and you'll be told the location of the convent.

Pick up Mary and fly to any red squares on this sector, stocking up on fuel found around the camp. Now fly to the convent. You'll probably be attacked by two planes. Shoot one down and you'll probably be left with one on your tail. Slow down and fly backwards and you should find it in your sights. On the same map as the convent is Smithy; pick him up and drop Mary. Once at the convent you'll be told the location of the sound weapon.

Fuel – is shown as red dots and when picked up will go either straight into the fuel tank or into the equipment list. You need to land to top up the tank with fuel you're carrying.

Machinegun – to use the gun you need ammo and Bertie.

Repairs – you need Smithy aboard to repair damage. He can do this only on the ground at the main locations.



Attention, cheats!

These pages are all about cheating at games, but some of you are taking things a little far and copying pokes out of other magazines. We get enough high-quality pokes without having to resort to such tactics. So please don't send them in.

The pokes printed are copyright and can't be used without the permission of the magazine that first printed them. The same goes for anything that appears here in Cheat Mode, so don't bother sending our pokes to anyone else because they will be bound by the same constraints.



Tips for the mechanical dinosaurs come from Owen Hibbert of Gosport.

1. Every red Zoid you destroy has spare power cells if you scan where it was before you destroyed it – not just Slitherzoids.

2. City domes, mines and beacons all leave power cells when destroyed.

3. If having difficulty destroying domes, move your sights to the very edge of a dome and the mountains will be less difficult to get past.

4. Nearly all parts of Zoidzilla are found in domes near or next to the power station.

5. If a city network has only a couple of Zoids in it then the chances are there is no piece of Zoidzilla. All pieces are heavily guarded, generally with Spinebacks.

6. In one network there are two Hellrunners going around together. Try to avoid these because if you destroy one the other will become a Spineback.

GREEN BERET

These tips from Mark Pinheiro of Tooting Bec take up where the ones in issue 12 left off, tackling the end of level 3. They're followed by two pokes entered using Method 1. The first is from Richard Hodges of Barnet, giving complete invulnerability; the second is from Phil Howard of Mapperley, giving infinite lives and flamethrowers.



Note: tape users on the 664 and 6128 will need to change **07,b8** in line 40 to **1f,b1**; in line 50 **ea,b1** to **e5,b7**, and also in line 50 **d9,b1** to **d4,b7**.

Level 3: At the end of level three, use up your remaining missiles as you approach the bridge, because when the gyrocopters start to appear a commandant will also appear and can be relieved of four missiles. Four copters will appear, plus a few troops which make life more hazardous.

To clear the copters you need to do a lot of jumping over the grenades they throw. When you are at one end of the screen and a copter is descending at the other, let fly a missile. Try not to use up the missiles when with the copters as only two or three commandants come on screen.

Level 4: This last stage is definitely the hardest of the lot. Lots of karate troops appear and also quite a few cannon. Climb the first ladder you come to at the hangars. If your timing is just right, jump, and you will land on the next platform. Continue doing this until you reach the end of the hangars; it is impossible for the troops to continue following you.

When you stab a commandant you get grenades. Fling one of these and everyone but you on the screen will die. When the screen stops scrolling at the end of the level and the siren goes four times, run to the left side of the screen as far as you can go and and lie down facing left. Stab continuously and you will kill the man with the flamethrower before he even enters the screen. Don't stand up and you will see his flame pass over your head after you've killed him. That should be the only person you have to kill.

A very bloodthirsty game.

GREEN BERET ONE

```
10 DATA 3e,c9,32,d4,24,c3,37
,bd,21,3a,42
20 DATA 36,59,23,36,f7,21,40
,40,11,40,00
30 DATA 01,fc,01,ed,b0,21,40
,00,e5,21,00
40 DATA bb,e5,21,fc,01,e5,21
,07,b8,e5,21
50 DATA bb,02,e5,f1,21,ea,b1
,11,d9,b1,f3
60 DATA c9
70 MEMORY &3000
80 LOAD""
90 CALL &3A6A
100 LOAD"!",&4040
110 FOR x=&BE00 TO &BE37
120 READ a$
130 POKE x,VAL("&"+a$)
140 NEXT
150 CALL &BE08
```

GREEN BERET TWO

```
10 DATA 3e,b7,32,c9,13,32,07
,25,c3,00,40
20 DATA 21,37,22,36,e7,21,40
,20,11,40,00
30 DATA 01,fc,01,ed,b0,21,40
,00,e5,21,00
40 DATA bb,e5,21,fc,01,e5,21
,07,b8,e5,21
50 DATA bb,02,e5,f1,21,ea,b1
,11,d9,b1,f3
60 DATA c9
70 MEMORY &2000
80 FOR x=&BE00 TO &BE37
90 READ a$
100 POKE x,VAL("&"+a$)
110 NEXT
120 LOAD""
130 CALL &3A6A
140 LOAD"!",&2040
150 CALL &BE0B
```

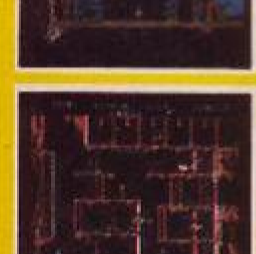
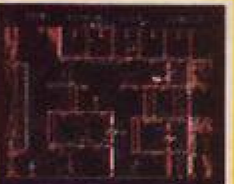
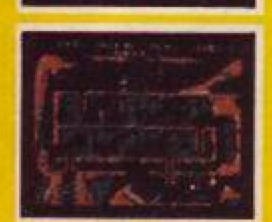
 from a game ...

U.S. GOLD
All American Software

Datasoft

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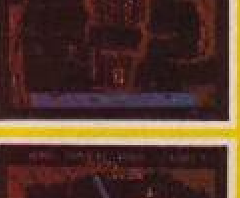
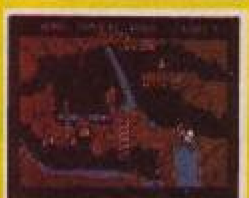
64

From the RICHARD DONNER Production

THE GOONIES™

Based on the Story by STEVEN SPEILBERG

ATARI





GHOST'N GOBLINS

We were flooded with pokes for the Elite game. Unfortunately many of you didn't work them out yourselves but merely copied them from another source. Needless to say such scurrilous entries were immediately binned, leaving the real class to show through. The poke we're printing is a compilation of ploys received from Robert Brooks of Yeovil, Tim Coupe of Derby and Tony Hoyle of St Annes.

The poke is entered using Method 1, and lines 20-80 contain many different pokes. If you don't want a particular one then just delete that line. Line 20 gives infinite lives, 30 takes you to the next level if you die, 40 slows the whole game down, 50 gives invulnerability to everything but water, 60 changes level when you press Escape, 70 makes zombies appear more quickly, 80 apparently affects the music (hard to tell if that one works).

If you don't want to use the pokes then try out the following tips from Mamood Sultan of Warndon.

Level 1: Keep moving right and jumping over the gravestones, making sure you fire at the zombies which appear. Jump up and shoot the killer bird and climb the first ladder without scrolling the screen, shooting the plant as soon as you get to the top. Kill the next bird and plant and jump off the end of the hill firing so as to hit the oncoming bird.

Having crossed the water on the raft dodge the flying knights by running under them. Shoot the flying demon as quickly as possible; four hits will kill him. The ghosts are fairly easy but watch out for their spears and the killer plant that appears. The ogre at the end of the level has to be hit seven times, so stand well back and keep firing as he leaps up and down.

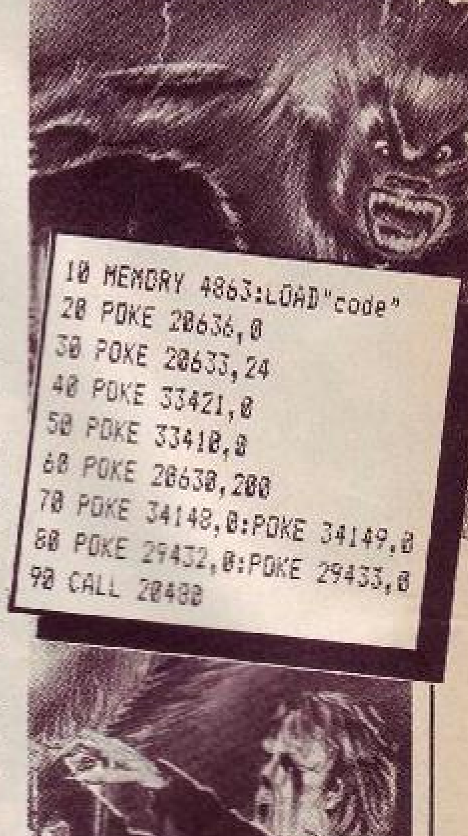
Level 2: Jump as high as possible straightaway and fire; this will destroy the plant. But watch out for the rock it will have thrown. Get to where the plant was, dodging gremlins all the while, and jump across and up where you can get the next plant. Keep moving right and shoot the last plant, then jump off the furthest platform to enter the town.

Gremlins and crows are everywhere so you need to be extra careful. When you get to the big house with five floors, shoot the goblins on the first four levels (each one eight times, watching for the flying hammers when they die). Move to the right of the fourth floor and go down. Once out of the house, prepare for flocks of birds.

On the lifts jump off one only when the next one is below you. When you reach land again, keep your distance from the two ogres and fire as rapidly as possible to kill them both.

Level 3: This level involves speed and a fast trigger finger. First you must shoot the bats and then climb the hill, shooting the rock monsters eight times to destroy them, avoiding the rocks they spit. Once you reach the stone part of the cave the monsters go wild: four demons, rock monsters, bats and flying ghosts. Keep going. Climb the first ladders you come to and shoot everything you can.

Eventually you come to the edge of the top platform and must jump off, falling several screens. Move right to the guardian – a flying serpent. He has to be shot 15 times in the segments of his body and four times in the head to kill him. After that it's back to where you started.



```
10 MEMORY 4863:LOAD"code"
20 POKE 20636,0
30 POKE 20633,24
40 POKE 33421,0
50 POKE 33410,0
60 POKE 20630,200
70 POKE 34148,0:POKE 34149,0
80 POKE 29432,0:POKE 29433,0
90 CALL 20480
```

How to win an ENTIRE ISSUE'S Rave software!

If you want to win an entire issue's rave software, including the Mastergame, then all you have to do is produce an excellent map, poke or playing tips. We've set you a number of challenges but if you can produce something even better then feel free – you'll have just as much chance of winning a prize.

The best solution will win a copy of every Rave and the Mastergame from the issue in which the solution is printed. The number of games will vary of course, but in past issues there have been six Raves or more – that's over £50 of software and some months it may top £100. The prizes will usually be on cassette, unless you request disk software of the equivalent value. We also give out five runners-up prizes every month of one of the Raves/Mastergame in that issue.

Deciding the prize winners was very tough this month. But just sneaking ahead of the pack was **Rhys Jones** for his playing tips and poke for *Swords and Sorcery*. Hope you enjoy the software, Rhys.

The runners-up are: **David German** for his comprehensive *Speed King* hack, **Alistair Graham** for his *Tau Ceti* tips, **Phil Howard** for his *Green Beret* and *Storm* pokes, **Timothy Lomas** for his *Storm* poke and **Allan Trotman** for his *Cauldron II* playing tips.

If you aspire to the heights of these worthy winners then get cracking on this month's challenges:

1. A map of *Nexor*.
2. A poke to make characters more friendly in *Doomdark's Revenge*.
3. A bomb-disposal poke for *Split Personalities*.
4. A playing guide or tips for *Fourth Protocol*.
5. A poke to make objects visible in *Qabbalah*.

COMMANDO

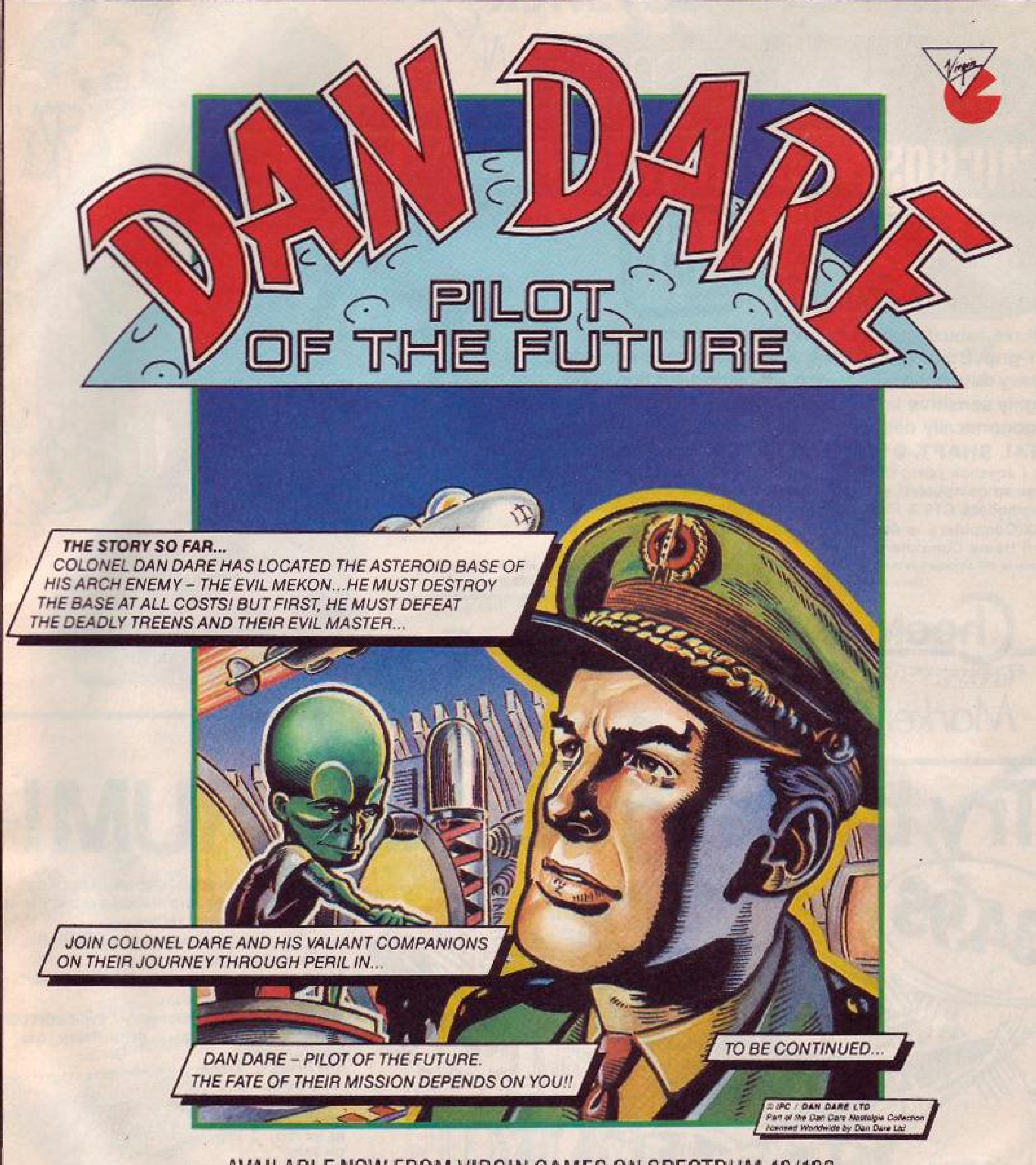
Peter Williams from Cambridge writes with help for frustrated owners of the disk version of the game. He's altered the poke for the tape game to work with the disk version, and here it is. Just type in the listing, save it onto the game disk and run it to load the game with 255 lives.

```
10 MEMORY &5BFF:LOAD"com1",&
5C00
20 FOR a=&9000 TO &9012:READ
 b:POKE a,b:NEXT
30 POKE &5C33,&C3:POKE &5C34
,&0:POKE &5C35,&90
40 CALL &5C00
50 DATA 205,122,188,175,50,1
5,78,6,6,33,59,7,119,35,16,2
52,195,54,92
```

BEACH-HEAD™

Richard Hodges from Barnet has a poke for the ageing US Gold game that gives infinite ships on the air and sea stages of the game. It means that as long as you don't take the secret passage you'll always have a full complement of tanks. It's entered using Method 1. Note: 664 and 6128 tape users should change **07,b8** in line 40 to **1f,b1**; in line 50, **ea,b1** to **e5,b7**, and in line 60 **d9,b1** to **d4,b7**.

```
10 DATA 3e,c9,32,b2,99,c3,80
,b2,21,81,22
20 DATA 36,09,23,36,b7,21,40
,20,11,40,00
30 DATA 01,44,02,ed,b0,21,40
,80,e5,21,00
40 DATA bb,e5,21,44,02,e5,21
,07,b8,e5,21
50 DATA bb,02,e5,f1,21,ea,b1
,11,d9,b1,f3
60 DATA c9
70 MEMORY &2000
80 LOAD""
90 CALL &3A6A
100 LOAD"!",&2040
110 FOR x=&BE00 TO &BE37
120 READ a$
130 POKE x,VAL("&"+a$)
140 NEXT
150 MODE 0
160 CALL &BE03
```



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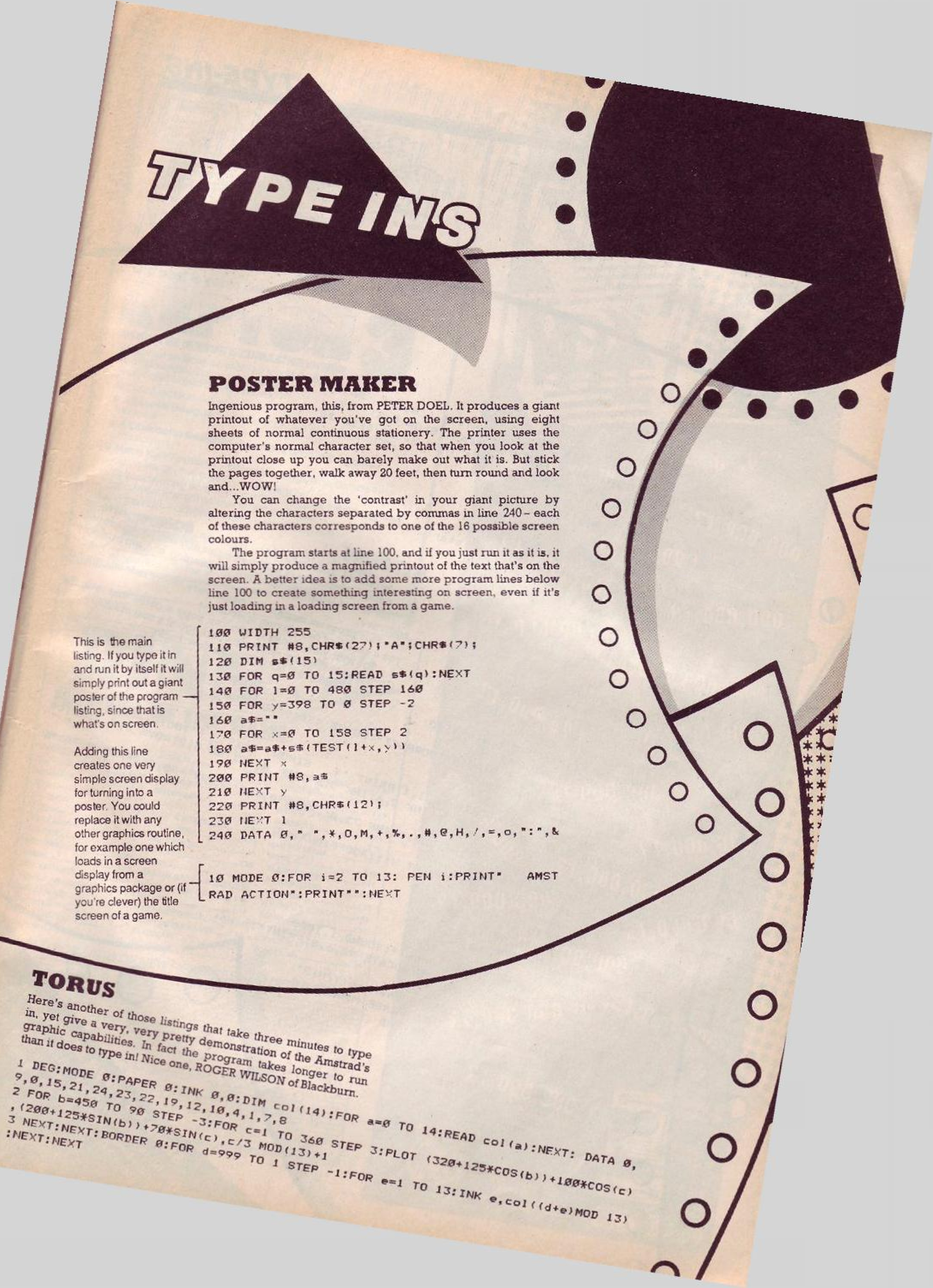
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POSTER MAKER

Ingenious program, this, from PETER DOEL. It produces a giant printout of whatever you've got on the screen, using eight sheets of normal continuous stationery. The printer uses the computer's normal character set, so that when you look at the printout close up you can barely make out what it is. But stick the pages together, walk away 20 feet, then turn round and look and...WOW!

You can change the 'contrast' in your giant picture by altering the characters separated by commas in line 240 – each of these characters corresponds to one of the 16 possible screen colours.

The program starts at line 100, and if you just run it as it is, it will simply produce a magnified printout of the text that's on the screen. A better idea is to add some more program lines below line 100 to create something interesting on screen, even if it's just loading in a loading screen from a game.

This is the main listing. If you type it in and run it by itself it will simply print out a giant poster of the program listing, since that is what's on screen.

```
100 WIDTH 255
110 PRINT #8,CHR$(27);"A";CHR$(7);
120 DIM s$(15)
130 FOR q=0 TO 15:READ s$(q):NEXT
140 FOR l=0 TO 480 STEP 160
150 FOR y=398 TO 0 STEP -2
160 a$=""
170 FOR x=0 TO 158 STEP 2
180 a$=a$+s$(TEST(l+x,y))
190 NEXT x
200 PRINT #8,a$
210 NEXT y
220 PRINT #8,CHR$(12);
230 NEXT l
240 DATA 0," ",*,O,M,+,%,.,#,@,H,/,=,o,":",&
```

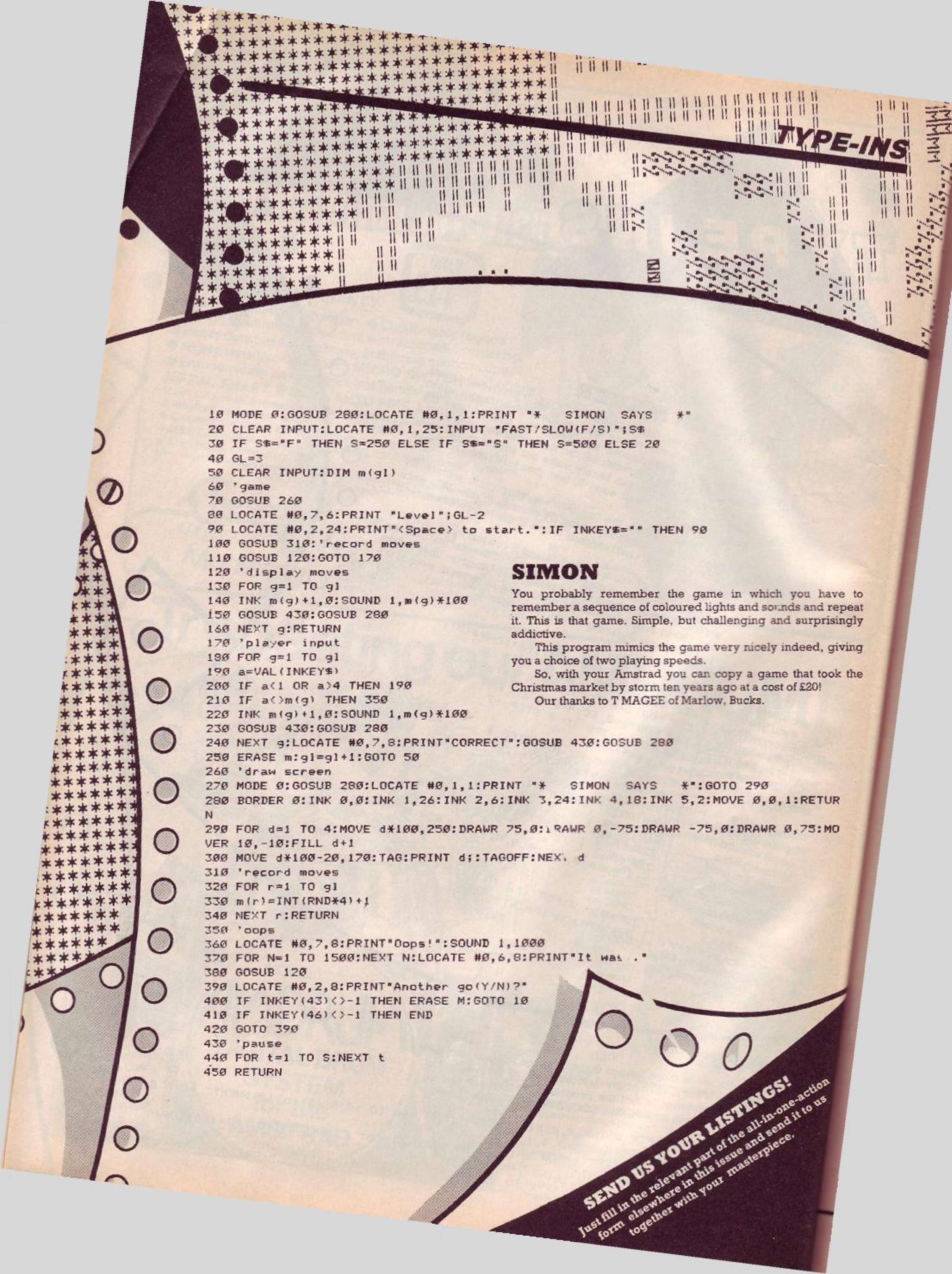
Adding this line creates one very simple screen display for turning into a poster. You could replace it with any other graphics routine, for example one which loads in a screen display from a graphics package or (if you're clever) the title screen of a game.

```
10 MODE 0:FOR i=2 TO 13: PEN i:PRINT"   AMST
RAD ACTION":PRINT"":NEXT
```

TORUS

Here's another of those listings that take three minutes to type in, yet give a very, very pretty demonstration of the Amstrad's graphic capabilities. In fact the program takes longer to run than it does to type in! Nice one, ROGER WILSON of Blackburn.

```
1 DEG:MODE 0:PAPER 0:INK 0,0:DIM col(14):FOR a=0 TO 14:READ col(a):NEXT: DATA 0,
9,0,15,21,24,23,22,19,12,10,4,1,7,8
2 FOR b=450 TO 90 STEP -3:FOR c=1 TO 360 STEP 3:PLOT (320+125*COS(b))+100*COS(c)
,(200+125*SIN(b))+70*SIN(c),c/3 MOD(13)+1
3 NEXT:NEXT:BORDER 0:FOR d=999 TO 1 STEP -1:FOR e=1 TO 13:INK e,col((d+e)MOD 13)
:NEXT:NEXT
```




```
10 MODE Ø:GOSUB 28Ø:LOCATE #Ø,1,1:PRINT "*   SIMON  SAYS   *"
20 CLEAR INPUT:LOCATE #Ø,1,25:INPUT "FAST/SLOW(F/S)";S$
3Ø IF S$="F" THEN S=25Ø ELSE IF S$="S" THEN S=5ØØ ELSE 2Ø
4Ø GL=3
5Ø CLEAR INPUT:DIM m(gl)
6Ø 'game
7Ø GOSUB 26Ø
8Ø LOCATE #Ø,7,6:PRINT "Level";GL-2
9Ø LOCATE #Ø,2,24:PRINT"<Space> to start.":IF INKEY$="" THEN 9Ø
1ØØ GOSUB 31Ø:'record moves
11Ø GOSUB 12Ø:GOTO 17Ø
12Ø 'display moves
13Ø FOR g=1 TO gl
14Ø INK m(g)+1,Ø:SOUND 1,m(g)*1ØØ
15Ø GOSUB 43Ø:GOSUB 28Ø
16Ø NEXT g:RETURN
17Ø 'player input
18Ø FOR g=1 TO gl
19Ø a=VAL(INKEY$)
2ØØ IF a<1 OR a>4 THEN 19Ø
21Ø IF a<>m(g) THEN 35Ø
22Ø INK m(g)+1,Ø:SOUND 1,m(g)*1ØØ
23Ø GOSUB 43Ø:GOSUB 28Ø
24Ø NEXT g:LOCATE #Ø,7,8:PRINT"CORRECT":GOSUB 43Ø:GOSUB 28Ø
25Ø ERASE m:gl=gl+1:GOTO 5Ø
26Ø 'draw screen
27Ø MODE Ø:GOSUB 28Ø:LOCATE #Ø,1,1:PRINT "*   SIMON  SAYS   *":GOTO 29Ø
28Ø BORDER Ø:INK Ø,Ø:INK 1,26:INK 2,6:INK 3,24:INK 4,18:INK 5,2:MOVE Ø,Ø,1:RETUR
N
29Ø FOR d=1 TO 4:MOVE d*1ØØ,25Ø:DRAWR 75,Ø:DRAWR Ø,-75:DRAWR -75,Ø:DRAWR Ø,75:MO
VER 1Ø,-1Ø:FILL d+1
3ØØ MOVE d*1ØØ-2Ø,17Ø:TAG:PRINT d;:TAGOFF:NEXT d
31Ø 'record moves
32Ø FOR r=1 TO gl
33Ø m(r)=INT(RND*4)+1
34Ø NEXT r:RETURN
35Ø 'oops
36Ø LOCATE #Ø,7,8:PRINT"Oops!":SOUND 1,1ØØØ
37Ø FOR N=1 TO 15ØØ:NEXT N:LOCATE #Ø,6,8:PRINT"It was .."
38Ø GOSUB 12Ø
39Ø LOCATE #Ø,2,8:PRINT"Another go(Y/N)?"
4ØØ IF INKEY(43)<>-1 THEN ERASE M:GOTO 1Ø
41Ø IF INKEY(46)<>-1 THEN END
42Ø GOTO 39Ø
43Ø 'pause
44Ø FOR t=1 TO S:NEXT t
45Ø RETURN
```

SIMON

You probably remember the game in which you have to remember a sequence of coloured lights and sounds and repeat it. This is that game. Simple, but challenging and surprisingly addictive.

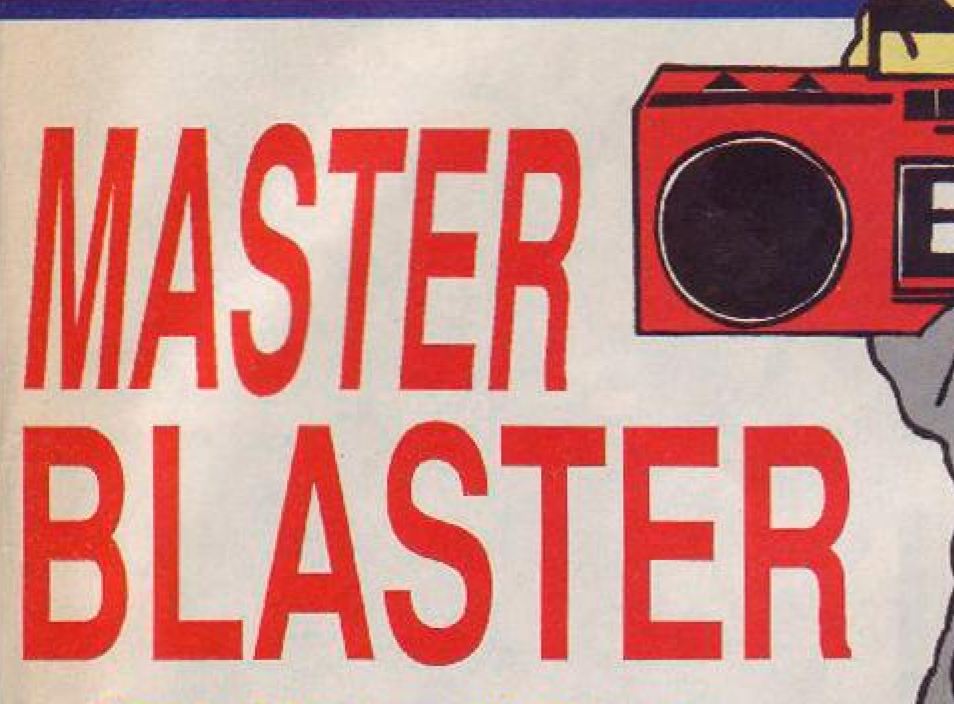
This program mimics the game very nicely indeed, giving you a choice of two playing speeds.

So, with your Amstrad you can copy a game that took the Christmas market by storm ten years ago at a cost of £20!

Our thanks to T MAGEE of Marlow, Bucks.

SEND US YOUR LISTINGS!

Just fill in the relevant part of the all-in-one-action form elsewhere in this issue and send it to us together with your masterpiece.



MASTER BLASTER

Ghettoblasters, Walkmans, watches and t-shirts are all up for grabs in our massive Mastertronic competition

Still wearing flared trousers? Don't know what colour shoelaces are 'in' this year? Does breakdancing simply mean six months in a plaster cast? Have your ears never suffered from a rap attack?

Then this competition is specially for you – win one of the fabulous prizes on offer and you'll have more street cred than a Radio One DJ in a Ferrari.

Mastertronic is the king of budget software. Not content with practically giving away their games, the nice people there also want to give you a whole host of super prizes that will put the sparkle back into your image.

All you have to do is loosen up your fingers and brain and produce a worthy work of art. The competition is split into two sections, under-16s and over-16s, but the prizes are the same for both.

The two winners will get an ear-blasting Saisho Ghettoblaster complete with radio, cassette deck and detachable twin speakers – your ears and the neighbourhood won't be the same again.

Two second prizes of a Sony Walkman will also bring music into your life, while the two third prizes of a digital watch will mean you're always on time for that special rendezvous. Five runners-up in each age group will also get a Mastertronic t-shirt and be the coolest-dressed player in the street.

WHAT YOU HAVE TO DO

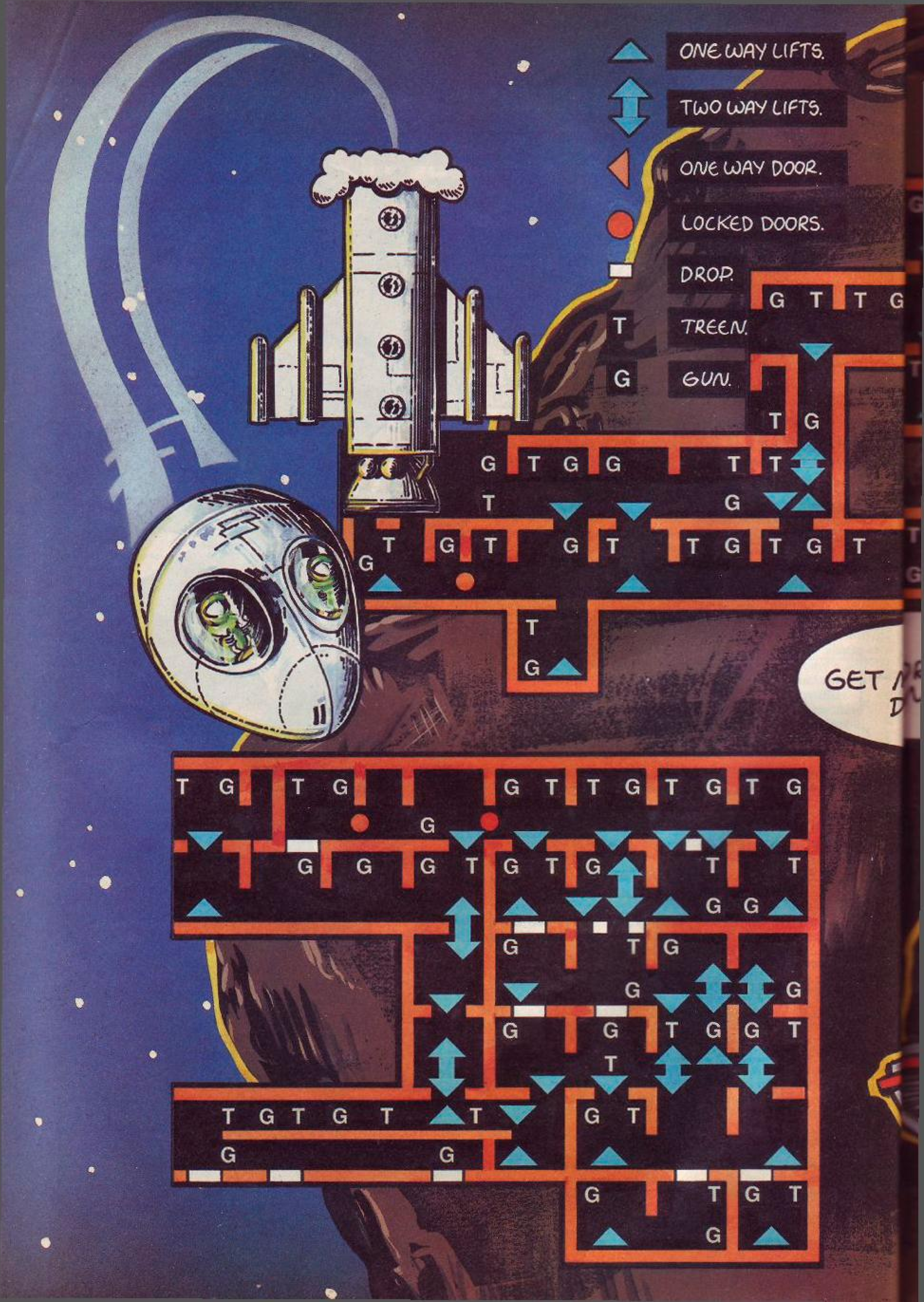
The **under-16s** can let their imagination run riot because we want you to draw the weirdest creature, monster, alien or beast that you can think of. You can do it in pen, paint, or anything you like – even *Art Studio*. What we'll be looking for won't just be artistic skill, but plenty of imagination and humour as well.

The **over-16s** can exercise their razor-sharp wits by producing a cartoon about Mastertronic. You can make it about the company, a particular game, the new joystick, or anything else to do with budget games – and again we'll be looking for humour and imagination as well as good drawing.

The winners will get an additional bonus: Mastertronic will frame the winners' entries and present them with a scroll to mark their achievement. With generosity like that what are you waiting for? Get drawing!

CLOSING DATE

Entries should be here by Monday 17th November. Use A4-size paper or smaller. Post to: **Master Blaster competition, Amstrad Action, The Old Barn, Somerton, Somerset, TA11 5AH.**


ONE WAY LIFTS.
TWO WAY LIFTS.
ONE WAY DOOR.
LOCKED DOORS.
DROP.
T TREEN.
G GUN.
GET



G T G T G
G T G T T T G T T T G
T G T G G T G
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T
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ORE THINGS
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TREV
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SO THERE'S DIGBY BUT HOW DO I SAVE HIM?

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KUNG FU/NUMBER 1
Two great Ocean games on one tape, as given away with the Christmas '85 issue of *AA*. If you missed it then, you could get it now.

THE COVENANT + DEMOS
A full version of the *AA*-Raved PSS game on tape, together with demos of four other PSS titles, and instructions for transferring *The Covenant* to disc. As featured on the cover of our May issue.

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PLEASE BEAR IN MIND

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Our seven-page special feature shows you what your CPC can do in the line of music: now you can put it into Action and save yourself pounds with this *Amstrad Action* offer.

The original *Music System* caused quite a stir when Pete Connor reviewed it in our March issue, describing it as 'a superbly executed package ... with a thorough and very clear manual'. Since then it has become the standard against which all music packages have been judged, and largely found wanting. *The Advanced Music System* extends the facilites still further, and 'the main section ... looks every bit as good now as it did six months ago'.

The package is very easy to use, with pop-down menus and windows. You can create three separate voices at a time. As you play, the tune appears in full musical notation on the screen. The *Advanced* version includes a printout module for printing six voices of music on proper staves on paper, and a linker module that allows larger pieces to be played.

We are offering you *The Advanced Music System* on disk for £7 less than you will find it in the shops, and if you haven't got a disk drive then we are knocking £3.50 off the cheaper *Music System* on cassette. If you are planning to buy a disk drive soon, then you can still benefit as Rainbird will upgrade you to *Advanced* for £14.

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Just a glance at this month's front cover shows you how much we rate this game. It offers stunning 3D space combat in a style reminiscent of *Elite*, but those vector graphics are filled in with glorious colour! The aim of the game is to break through the enemy's defences, destroy the central reactor, and escape fast. But there are a variety of planets, each with ever more powerful and varied defences, each of which have to be destroyed.

The defence of the galaxy is in your hands. At £9.95 this game merited Mastergame – at £6.95 it could be yours.

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These offers are separate from the rest of our mail-order scheme. You cannot use the vouchers on the mail-order page to obtain further discounts and free gifts – we've already knocked off the most we can! However, if you prefer, you may order any of the items on this page at their NORMAL FULL PRICE through the ordinary mail-order scheme on the previous page. You can then use the relevant voucher and, if the price is over £15, claim a free gift. This could make sense if you are ordering other goods at the same time.

OFFERS

BINDERS

These binders look every bit as good as the magazine, and include the name 'Amstrad Action' embossed in blocked Newvap Gold on the spine. Individual magazines are held in place by being slotted behind one of 12 wires

Loyal readers, don't delay. Request your binder right away!

Save £3!
POWERPLAY
Yours on cassette for just £6.95

AA-Raved in this issue with a rating of 88%, *Powerplay* is a game with a difference. And if you've ever played Trivial Pursuit – this is Trivial Pursuit with a difference too!

Like the board game, *Powerplay* requires you to answer awkward questions in order to progress. The game comes with over 2,000 questions built in, and new questions can be added with its question compiler. However, unlike the board game, there is a whole new level of strategy involved.

Play is set on Mount Olympus, and each of the four players plays a Greek deity. Each player has four warriors moving around a grid of colour squares; the colour of the square determines the category of the question. Players can challenge other players in their bid to destroy the other teams.

It is a great game at £9.95. At £6.95 it should be in your collection!

SUBSCRIBE!

Ensure that you get the next 12 copies of *Amstrad Action* with the minimum of fuss. £16.50 will make sure that every issue materialises on your doormat without you having to lift a finger.

NEXUS 128
EXPANDED VERSION FOR YOUR CPC6128
Only £12.95 on disk!

EXCLUSIVE! Available only through *AA*!

We are offering you the chance to buy this September *AA* Rave, especially expanded for the 6128 machine, at a special low price. You won't find this version in the shops, or in any other magazine – it is available only through *Amstrad Action*.

Nexus, from a new software company of the same name, is set in the headquarters of a powerful drugs baron based in Colombia. He has captured a friend of yours, and your mission is to rescue him and break the drugs ring. You are helped by members of N.E.X.U.S., an undercover operation working to bust it from inside. To break the ring you have to find the answer to a number of questions posed at the start of the game.

The ordinary version of the game, as available in the shops, has eight levels – this version has a full ten. The original version poses you 32 questions – this version asks you to solve 42! It is bigger, better and cheaper from us!

Half Price!
Special offer for readers taking advantage of these pages:

ISSUE 4 - with OCEAN cassette
Only 75p if you order any other item from these two pages!

The 116-page Christmas issue of *Amstrad Action*, with *Kung Fu* and *Number One* from Ocean on a cover cassette, retailed for £1.50 and as a back issue normally costs £1.85. You can have a copy and halve the original price if you take up any of this month's Special Offers.

The cassette is arguably the best gift ever stuck to a magazine cover, and up to the standard you would pay pounds for over the counter. *Kung Fu* has superb animation and a two-player option; *Number One* is an addictive rollerball game with super-fast 3D graphics.

And the issue itself isn't bad either, with our usual reviews and news, a look inside the doors of Ocean, and plenty of maps and game-pokes. Superb value at £1.50, and it could be yours for 75p!!

Save £2!
TRIO:
Sam Goes Shopping
Table Test
Computer Snap!
Yours for just £7.95 on cassette, or £12.95 on disk

If you've been looking for software to get Arnold educating your tots, try *Trio*, three programs aimed at making learning fun for kids. When we first saw this software we were so impressed that we helped the authors find a suitable publisher, and now we can bring it to you at this special price.

Trio is the first foray into educational seas by Piranha, a 'small but lethal' software team within Macmillan, which is one of Britain's most respected names in the world of books.

The three programs in the set are *Sam Goes Shopping* (a challenge to even adult memories), *Tables Test* and *Computer Snap!* (with no cards for parents to have to clear up afterwards). It is great fun for kids of all ages!

THE ALL-IN-ONE ACTION FORM

This form has been created by the Save-Your-AA-From-Being-Overhacked-Department. You can use it to register your votes for Games and Serious Software, or to send in your Type-ins, without losing any news or reviews.

PLEASE NOTE
You have a TOTAL of 10 votes for each chart to allocate between up to five programs – eg. you can give all 10 to one program or split them say 4+2+2+1+1.

GAME CHART VOTING FORM

I would like to vote for the following games:

GAME	SOFTWARE HOUSE	VOTE ALLOCATION
1.		
2.		
3.		
4.		
5.		

SERIOUS SOFTWARE VOTING FORM

I would like to vote for the following packages:

PROGRAM	SOFTWARE HOUSE	VOTE ALLOCATION
1.		
2.		
3.		
4.		
5.		

TYPE-INS

You can help us out at AA, and give your type-ins a far better chance of being published, by filling out this form and wrapping it around your cassette with a rubber band. It would also be an idea if you send it in a jiffy bag as an awful lot of cassettes arrive here damaged.

Name..

Address..

....

....

....Postcode..........................

TITLE...

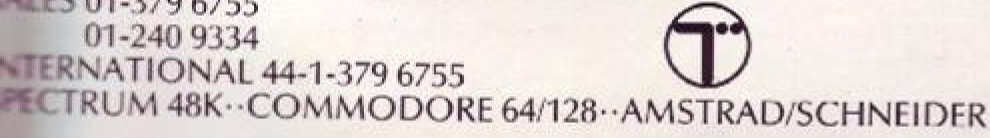
DESCRIPTION:

I hereby declare that the program on the attached tape is all my own work, and that it has not been sent to any other publication, nor been published in any form, or submitted to a software house for consideration as part of a commercial package.

Signed...Date....................................

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